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ABSTRACT

The minutes of the 1978 meeting of the Association of Research Libraries (ARL) include the texts of the following presentations: "Current Issues in Higher Education," Thomas A. Bartlett; "What University Administrators Want to Know About Research Libraries," Emmett B. Fields; "Performance Measures for Research Libraries," Vernon E. Palmour; "Planning for the Catalogs: A Managerial Perspective," Joseph Rosenthal; "Two Years With a Closed Catalog," Robert Blackburn; and "Implications for ARL Directors of Freezing the Library of Congress Catalogs," H. William Axford. These are followed by minutes from the business meeting and committee and special reports on preservation of research library materials, ARL statistics, National Library Network Development and Bibliographic Control, Council on Library Resources, and increases in ARL dues. The appendices include a report on a survey on the status of planning in ARL libraries, a draft of the standards for university libraries; lists of officers, members of the board of directors, committees, and task forces of ARL; and an auditor's report. (JEF)

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Changing Environment for Research Library Development

Minutes of the Ninety-Second Meeting

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ASSOCIATION OF RESEARCH LIBRARIES

Minutes of the 92nd Meeting

Ray W. Frantz, Jr., Presiding

The Ninety-second Meeting of the Association of Research Libraries convened at the Opryland Hotel, Nashville, Tennessee. May 4 and 5, 1978.

President Ray W. Frantz opened the meeting by welcoming and introducing both the new and alternate representatives attending their first ARL meeting and the guests of the Association.

CURRENT ISSUES IN HIGHER EDUCATION

Thomas A. Bartlett
Association of American Universities

MR. FRANTZ: The theme of our conference is "Changing Environment for Research Library Development". I think we all know how our own libraries operate, but the educational climate is changing, and we have reached the point where we need to know more about how others view us. I am very pleased that our speakers this morning will help provide this insight.

Our first speaker has been an advisor to the United Nations. In 1969 he became President of Colgate University. He is Past President of the Commission of Independent Colleges and the University of the State of New York, and, since August of 1977, he has been the first full-time President of the Association of American Universities, based in Washington, D.C.

I am happy to welcome Thomas A. Bartlett, who will speak to us on "Current Issues in Higher Education."

MR. BARTLETT: From time to time, I do something to reestablish my credentials as an academician. One characteristic of academicians is absentmindedness, and on this trip I have managed to be absentminded twice. I think I should report this to you so that I am sure you will see me as the real thing.

I managed to miss the plane last night in Washington, and getting to Nashville when you miss the plane late at night is not an easy thing. So, I may be the only one that has come to Nashville by way of Atlanta. Having missed the plane -- which I thought I had gotten over years ago, as a college president for fourteen years who needed to live with the airlines -- I then discovered, in getting ready to talk, I had drastically changed my topic because of my own preoccupation with problems in Washington. So, I am going to talk on two quite different levels, quite as if I were making two quite different speeches. If it sounds that way, it is because I have both the one I originally prepared and the one I thought I should have prepared, as I spent last night hitchhiking down to Nashville.

I am going to start by talking about the issues facing higher education at a fairly cosmic level, because I want to draw a context. All of this will probably be very familiar to all of you because it is the world in which all of us live. Let me, nevertheless, go through some general statements about what is happening now in higher education, which, it seems to me, sets the agenda of issues we are going to be dealing with in the months and years ahead. After that, I shall return to my preoccupation with what is happening in Washington by talking about things that are of greatest concern to higher education, and, by implication, to research librarians, because of the symbiotic relationship that exists between them.

One of the things that has impressed us all is the extent to which the future is not going to look like the past. That is always a safe statement. It reminds me that Adam is alleged to have said to Eve, as they were exiting the Garden of Eden, "I think we live in an age of transition." That is a fairly safe generalization for any period of time. In higher education, and in all the elements of the integral enterprise that goes with it, however, we have just come to the end of what must be regarded as a period of abnormal growth. Driven by certain philosophical and psychological factors associated with population trends and the particular stage we have reached in our economic life in this country, it has been a remarkable period. It seems to me unparalleled in any other culture. I expect it is also without parallel in our own history. I doubt that we will do it again, but the important thing to remember is that it was an abnormal period. We have all grown up in it as if it were normal, but it was not. If the thing we have just come through is peculiar, the future to which we are going will be, in some sense, normality. The process into which we are going could well be thought of as our search for normality in education, in research, and in the whole intellectual enterprise.

What is normality? Well, obviously, we do not know. It is not a precise formula which does not change, but it is something different from the single-minded concern with quantitative growth that has occupied us recently. It will certainly involve such things as concern for organization, but "consolidation" does not need to be a negative term. It will mean a lot of concern for administrative processes. In my view, if we are wise, it will also be a period of differentiation. We have gone through a period when our concern was to replicate models. It seems to me we are now going into a period when we will try to be differentiating. We will be seeking inertia in the whole ecological system, and trying to specialize to fit different needs.

That is what we will do, if we are wise, but what we will do if we are not wise involves a wholly different set of concerns.

In this procedure of shifting from an abnormal period of sustained growth -- which, obviously, had to come to an end -- to a period of consolidation and differentiation, there are some obvious issues with which we are going to have to grapple. One that immediately becomes apparent, no matter what part of the enterprise we are in, is the concern for relations with public authorities. That is true whether you are talking at the level of state governments or the Federal government. This is hardly a revelation, since a portion of almost every one of your days must be spent dealing with growing impingement upon your enterprise by state and Federal government agencies. But it has some characteristics which I believe must be noted.

I do not think we are the victims of malevolent forces and malevolent agencies who are out to get us or even out to control us. I think we are instead dealing with something much more constitutional and, in some ways, more difficult to deal with. On the one hand, there is a kind of suspicion (and you may judge its wisdom) concerning our capacity to deal with our problems. I am not sure the public agencies that regard us with suspicion are wholly wrong, since we have not had an absolutely superior record in developing our

own internal mechanisms for dealing with our problems. But there is clearly a suspicion abroad in the land that people in the intellectual enterprise may not be able to deal with some of the problems they present to the rest of the society. Therefore, public agencies feel inclined to step in and help them out.

That stepping in takes the form of state coordinating agencies and of Federal relations. These have a great variety of influences upon us which are benign in their intent. I could leave it to you to decide what the result is, but, clearly, it is not very wise for us to look at this as a simple act of malevolence. However, the impact on us is so great that one of our real problems in the next decade will be how to repel some of these intrusions, how to channel them, how to reinterpret ourselves to public authorities, so that, for whatever reason, the encroachment of public agencies does not seriously hamper or hobble our enterprise.

In the case of universities, it is quite clear that major structural issues will be fought out in the decade ahead. One of these is the relationship between the professional schools and the rest of the university. One does not know which way this will go, but one can see pressures that could push it either way. For example, there are those who say that the pressure of outside intervention in professional schools, coupled with the financial pressures at work on them, will cause them to draw closer to their universities for protection and for assistance. On the other hand, there are those who see the process going exactly the opposite way. I suspect this is the predominant view at the moment.

This latter view of professional schools suggests that, given the problems faced by universities and the relative unavailability of means to deal with them, professional schools will increasingly become a part of a confederation composed of the university's central core, its graduate facilities, and its liberal arts colleges. Whatever organizational name and structure they maintain, universities will be less and less integrated, less and less strong, as they become this kind of confederation.

If that is the trend, then clearly it has great implications for all of us. I, for one, would think this unfortunate. I think we have seen enough of university systems in other countries where that trend has been prevalent to suggest that is not a route we would want to travel.

Accountability is another problem. Clearly, along with structural issues, our relationship to public authority, the internal structures of our university institutions, and other kinds of issues, comes the whole issue of accountability. Accountability to whom? And for what? Accountability has often been a euphemism for an argument among accountants. Occasionally, it has been simply a way of saying that you should not have the degree of autonomy that you have. But accountability is, in a fundamental way, something we should all accept.

At the moment, I feel we are committed too strongly. Thus, part of our problem is to redefine people's image of what accountability is. Ultimately, accountability is a matter of being responsible for students' education, of being responsible in creating research programs that are legitimate and protective. That is to say, accountability finally must be measured by results as well as by procedures. One can easily imagine an absolutely perfect procedure, in which everybody is accounted for in the least detail -- the net result of which is nevertheless to produce nothing. So, surely, our problem is to get people thinking about accountability in terms of results as well as the more primitive notion of simple procedures.

When one begins to look at the problem of change in these cosmic ways, one is driven back to a central challenge. That is, how does one get quality and individuality that is not driven by growth? That is the challenge we are all going to face in the next decade. The challenge does not seem impossible at all, when stated in those terms. In some ways it could even be rather inviting.

That leads me to a concern I frequently feel when I look at the sweep of events in which we are now playing a part. There is a real danger of developing a kind of storm cellar mentality. We are all concerned with research and education, and we see the problems. We also see the threat of change, and nothing is more threatening to us, as professionals, than change. We all make nice noises about change, but, in fact, we find it very threatening and very difficult to deal with. As we face a time of new limits and new attitudes, it is quite possible to regard the situation as a threat. The response to that threat could be simple defensiveness. For example, we may respond with unionism, through which, in a very conservative way, we try to nail down jobs and privileges. Similar responses manifest themselves in essentially hostile attitudes towards public agencies and public instruction, whatever their motives and style of operation, or in a sense that the good days were the old days, that, at every point, our job is to preserve and protect, as we go into what will be a much less buoyant and flamboyant period.

That is one way to respond. In one way or another, people are responding to a lot of things in that fashion. To my mind, however, that is unfortunate. It is self-defeating, and it is unnecessary. I am an optimist, I should tell you, or I could not do the strange things that I do in life. To me, therefore, these defensive responses are unnecessary, because, if we take ourselves back into quite different periods and look at the intellectual enterprise as it was then, we can hear others saying:

> "If we did not have to worry so much about buildings and training people in a frantic way, if we did not have to deal with these hordes of people coming through our institutions or using our facilities, we could get on with the really important thing, which is quality. We could turn our minds to doing the thing we know best, which is to make discrimination, differentiation, identifying purposes in a refined way, and doing it well. But we are caught up in such a slap-dash operation that we really

do not have time to do things as well as we would like to, thank you very much. And that is why we did things a litle sloppily in cases X, Y, or Z."

Can't you think of those thoughts going through you mind, and people talking about what, if only we did not have the problems of quantity, we could do with the problems of quality. Well, now we are going to have that sort of situation. We are then challenged to say what our vision of quality really is.

I have gone through a discouraging number of sessions here in the last couple of weeks, one on the future of graduate education, another dealing with issues of the fundamental research relationship between universities and the Federal government. I was disturbed, in both of those instances, by the difficulty of drawing forth any sense of vision about what ought to be. "What ought to be" consisted of not having the problems we now have. What ought to be consisted of getting back to what we thought we once had, without the difficulties that were accompanying it. But what we ought to have is a vision of our relationship to the intellectual enterprise and to the society that supports it, to the organic links we have with our own culture. When you start talking like that, using the kind of "if" syntax that intellectuals use when they have nothing better to do, then people really draw back and punt. That absence of vision simply increases our tendency to draw back in the way I have described, as kind of a storm cellar mentality.

Incidentally, it is always fun for me to hear Howard Bowen talk about the future of education, because Howard is one of the people who does not do this. He really does have an enormous buoyance of spirit, when looking at the products that become available when you take out the impairment of growth.

Now, let me shift to a series of issues which are a little more immediate than the general statements I have just been making about the style and nature of the time we will find ourselves in -- a time which most of us will not like in certain aspects, because we are going to be so concerned with organization and procedure at very precise levels. Let me talk now about some immediate issues in Washington. I think, by the time I get through, you will see some interaction between the two quite separate parts of what I intended to say.

Let me start, as a kind of transition, with what I believe is the general problem facing research universities. These are the things you have heard from your colleagues many times. For thirty years, the research universities and the Federal government maintained a relationship which we all thought of as a partnership. This partnership came out of the second world war. We had a war to win, we had to mobilize the country, and we had to mobilize the intellectual resources of the country. The Federal Government had to invent mechanisms in a hurry to support those intellectual capacities. It used the only modes it knew well, which were purchasing modes. The universities looked rather superior, drew back, and said, "Fine, we will use a purchasing mode, but down inside we all know we are really partners in a common enterprise for a public good. We are not buyers and sellers." For thirty years we lived

with that kind of fiction. On one hand was the Federal Government using the buyer-seller framework. On the other hand was the university, knowing deep in its black heart that it was really doing something else. We operated by free enterprise, and we never really knew where we were, but it did not matter, because things were done and really done very effectively.

Now, in this new time and style, people are saying, "Well, but you are not really following the rules. You are not really doing the things that the buyer-seller relationship calls for us to do, and you send all these statements that you are. What is this? Obviously, you must be corrupt or you are perverse. It is fraud." The reaction of the university is to shout foul. "Wait a minute! We have been doing what, for thirty years, we understood we were supposed to be doing. The research and training capability we have erected is the most powerful libertarian enterprise in the world. Our research activities are the envy of every other culture. This is what we are supposed to be doing, and moreover, if the Federal and state governments -- but particularly the Federal government -- would not get in our way so much and would not make the procedure into such an obstacle...." Unfortunately, we have a fourteen-billion dollar a year misunderstanding each year.

One of the ways to find our way through the difference of perception which pervades so much of our relationship to public authority is to define the research enterprise itself. Are we going to operate according to a partnership model or a buyer-seller relationship? How much of each? One of the major problems that we are going to face in the immediate future is working our way through that issue.

One clear sign of the prevalence of this controversy is the current debate about a series of regulations OMB has called "A-21 cost principles." The problem really exists on two different levels. One is the level of the accounting detail (which, of course, affects librarians very much), and the other is the level of the assumptions that lie behind the discussion.

One problem universities face, when looking at the new A-21 revision, is the difficulty of accepting the relationship between the Federal Government and the research universities which the new rules suggest. That relationship could be expressed this way: If you take OMB A-21 revisions literally, they say that all universities should allocate indirect costs by formulae. All universities should be accounted for in essentially the same way. We should get away from all the individualization of arrangements between the Federal government and universities. If you believe in management by cost principle, this is a perfectly logical way to look at the problem. On the other hand, the universities believe that, if you apply such regulations over a period of perhaps ten years, all university research operations will have to start looking the same. If you drive universities with formula-driven procedures, all their programs are going to wind up looking the same after ten or fifteen years. If there is one thing we all believe in, it is the notion that it is not desirable for us all to do things precisely the same way. We have no such linkage, as it is. It seems, rather, that one of our problems is differentiation.

Well, the argument will go on. Of course, the implications for libraries of instituting these cost principles are enormous, because, under the present A-21 regulations, library support coming out of research is derived on an institution-by-insitution arrangement. The new regulations would force us to allocate money for research libraries on the basis of head counts. The regulations simply ask, "How many people use the library?" The trouble is that the regulations treat freshmen and faculty members all the same way. I think we will be able to have some impact on the A-21 revision, but the issue certainly has brought forth a lot of rather specific arguments, and there is a lot conversation going on. A team of major university presidents will be in Washington May 10th for the first of a series of meetings. We are trying to move the discussion very much to the policy level, to get away from an argument of "our accountants against your accountants" because, in the end, we will lose that battle however it comes out. In terms of public purpose, on the other hand, we may have a case.

Among the other things that clearly affect libraries and research universities is one issue you may or may not have noticed. That is the argument over a bill to deal with DNA research. This may seem like a fairly obscure technical issue, concerned only with what rules govern research on DNA. But, of course, it is not a very obscure and very limited argument when you look at its broader implications, because it raises two quite clear issues. First, how do you reconcile public protection in research with freedom to do research. Second, who is going to make the rules which accomplish that reconciliation? The issues of public intervention in and control of research are right there below and surface, sometimes protruding through. The issue of the relationship between the specialist and the technician, the professional people on the one hand and the lay person on the other, are also constantly implied. I think we are picking our way through that issue in quite a good way, because, obviously, we have to compromise.

The issue that has really been difficult here is what is called "local presumption." That is, Federal presumption of local regulations. The question is, "Can every locality set up its own DNA controls?" Could your local city council set up controls over research in your university? I think that is the issue which has given the university community its most insistently painful moments: the danger that such local control could come about.

It looks as if most people in the Federal Government are now aware of the risks this would entail: the possibility that it could drive out of our community and into other countries very important basic research that is really not dangerous after all, but that could be made to appear so. In the House of Representatives, it seems to me the signals are "go." The leadership there is quite clear on the issues, and will see that important research remains possible in our universities in an environment which is tolerable. It is a little tricky, but I think the outcome will be all right.

Of course this is just the beginning of the issue, because we will have continuing debates of the same sort. Every issue in biology, in medicine, and in medical research is somehow going to be affected by the outcome of this

bill, and this debate is going to be reviewed on a whole series of subjects. Certainly it will have a major impact on what happens to the research enterprises of our universities.

Another source of speculation about the grovernment-education relationship surrounds the possibility of a Department of Education. Let me just say that this issue has become less and less interesting, as the debate has gone on, to the point where I now think we can regard it with, if not bored detachment, at least a certain amount of benevolent indifference. In my view, the executive government must be reorganized by the creation of very large units at the cabinet level. The President has too many people reporting to him. He has to reduce that number by establishing some super departments. In a sense, there must be a layer between the President and the departments, as in the DOD model, and obviously the creation of a Department of Educaton goes in the other direction. It is one more, not one less, department. Moreover, it is not a complete department. It would handle most education, but not all, and it is a curious blend when you begin to consider what is in and what is out. At that point, I must say I lose interest.

Over the long run, it will have some impact on libraries, because the routes by which the Federal Government supports libraries will likely be set up through the outcome of that debate. But, as I say, I do not see much change coming, and I am by no means convinced that the Department is ever going to come into being. The intensity I felt about it last fall has diminished greatly now. I will be glad to comment if you are all absolutely fascinated by it.

Finally, libraries -- I very cleverly left this to the end, as you noticed. One interesting issue at a rather preliminary stage in Washington is the question of the establishment of a national lending library system. At this point I am immediately on very thin ice, because each of you knows more about this than I. All I can do is present you some impressions which you can test against the facts.

There is, it seems safe to say, a widespread sense that a different kind of organization among research libraries needs to be brought into being. That new organization is a process of backing up research libraries with a national lending system. As always, with this kind of thing, the question finally comes out: "Who does it?" "What shall the form be?" "What are the details?" Because at a certain level of generality, almost everybody agrees with almost everything.

We do not know the answers to those specific questions, but we do know there is a very good possibility of getting Federal support for a national system, if we can produce a consensus among the appropriate bodies and agencies on what the system ought to look like. At present, we are in the process of talking our way through these issues. Where does the Library of Congress fit in? Where does the Center for Research Libraries come into this? What role will be played by the regional systems that already exist? How are these going to fit into a national system? What is going to happen

with the report that is going to come out before very long on a national periodical system? We are going to have to talk our way through this and reach enough of a consensus so that the political people in Congress can move forward without being afraid they will get their heads chopped off by one force fighting against another.

Discussion on this is proceeding very actively, in a way that suggests results can be achieved. I do not think we are off in the blue. I think there is a real possibility of Federal legislation and Federal money to help a largely user-supported and user-controlled national system. That is rather exciting. It is something that will lend a new possibility to scholarship -- the notion of people all over the country having availabile all scholarship -- and that is a very exciting process. I think we are making our way through the verbiage and through the particular interests (and they are all over the land), so that we will finally produce some kind of compromise and consensus.

As a last comment about libraries, let me mention a little something you have just heard casually about: the Strengthening Research Library Resources portion of the Higher Education Act. The administration has asked for five million dollars this time in its budget. The silence from the library community, as well as from the university community, has been deafening. Some of us thought we had a good chance of getting more money under that heading, and we may still. We tried to alert some of our AAU colleagues that this was a time to do a little lobbying. I just want to mention to you that a little activity in this regard could make a little bit of difference in the way that an appropriations bill comes out. I think we could get a little more than we are now slated to get.

Okay. I am going to stop, having probably exhausted not only my suggestions, but also you. I have artfully avoided the most difficult issues, which is something I learned to do as a college president in the late Sixties.

DISCUSSION

MR. LORENZ (ARL): In this environment you described so well, what priorities has AAU set for itself? How do you see those priorities in relation to ARL?

MR. BARTLETT: On the latter question, I am a bit foggy. The fist question I am clear on. The area in which we most clearly overlap with ARL concerns is the national lending library. That is an issue in which the AAU has a strong interest.

At the last meeting of the presidents of the Association (AAU), which was about three weeks ago at Stanford, I was impressed with how much interest there was. Library issues -- well, pardon my saying -- usually do not electrify people. It is not one of those things that gets people up and cheering. But in this case there was a lot of interest, a sense that this offers the possibility of trying to get ahold of a series of problems which, from the point of view of the presidents, are simply mind-boggling.

When you start projecting the cost of supporting growing research collections, especially trying to catch up on the non-periodical side despite the growth of expenditures for periodicals, when you start contemplating the escalating costs inherent in the problems of organization, and the apparent problems of use in libraries, there does not seem to be any way out. Therefore, there is a lot of interest in what appear to be creative cooperative proposals, and I think that is a very good perspective in the discussions of AAU.

We have a committee of presidents which was set up last fall to consider the subject of research libraries, and it has very good attendance at its meetings. The members of that committee have been in touch with most of the people we think are leaders in this field. I think that will continue.

Now, if you ask the other question, "What priorities has the AAU?", I think the first one is this concern for the relationship between a research university and the Federal Government, particularly in science research, but not only in science. How are we going to find our way to a better relationship? In some cases the problem is not incipient, it is pronounced. I think that is our biggest general agenda item.

Our next one is to develop some policy on graduate education. Since there will be no jobs for humanities PhD's in the next decades, we face the problem of capturing young scholars for research and intellectual work before they get off into industry (and other activities in the case of the natural sciences).

What is the purpose of graduate education? How big should it be? Who should pay for it? We have no consensus from the university community, to say the least, and we are very fractured on this. But neither is there any national conception of what we are doing in graduate education. Clearly, some conception of priorities and programs to give a continuing focus and meaning to graduate education has got to be high on our agenda. We have been able to take too much for granted for too long, but we cannot anymore. These decisions will have a major effect on research libraries.

The third area is professional education. What shall be the relationship of professional schools to our universities? Indeed, what shall be the characteristics of professional schools in the future? There are a whole cluster of issues there that AAU is trying to address. That is very general. Right now, we would like to get A-21 revised.

MR. AXFORD (Oregon): Dr. Bartlett, you expressed some concern about the formula for indirect cost allocations related to federally-sponsored research. You also mentioned that you were reminded that the country had pretty much been sold on a formula, a student-driven model, for universities as a whole during the past few decades. Is that particular formula, the student-driven funding model, adequate for the university itself?

MR. BARTLETT: It seems to me that doing everything on a kind of per capita funding formula is one of the fundamental obstacles, when we try to

address the issue of quality vs. quantity. The issue is not "How many students can we take care of and get to our institution?" but "How can we achieve our purpose at a high level of quality?" Everybody nods when you say that, but then they immediately turn to the funding mechanism, which is a per capita formula-driven system.

I remember Ernie Boyer, in his early career as President of SUNY, time after time lamenting this when we were talking about fundamental problems in the New York context. How could he get SUNY funded in such a way that it was not student-driven, so that he could begin to develop what SUNY clearly needs, a differentiation of missions and quality to balance its very effective ability to provide services, which is enormous? One of his problems was just this. I am sure we have to get at it. I wish I knew how. Having seen the trap that gets you into, there is no point in repeating it. It is suggestive of one of the traps we could get into with formula-driven finances.

All I have done, of course, is restate your problem, because I do not have the answer, and I am very much aware of that. It does seem to me, though, that we are at least beginning to act, which should get the problem a little way. For so long, we all took for granted that it was great to have formula-driven financing, because we always had more students coming.

Now, incidentally, I do not think we know enough about what our student mix in the future is going to be to know exactly what kind of an educational enterprise we are going to need. That is one of our problems. I think there is really something in the notion that the makeup of our student body in the future is going to be a little different from a student body in the past. So, I do not think you can easily extrapolate from one to the other. To ignore the fact that we are going to have large declines in the number of students is pretty short-sighted.

MR. HAAS (CLR): In meetings like this over the years, there has been constant discussion about trying to control library costs. In connection with your concern about the relationship between library cost and research activity, about two-thirds of our library cost is directly linked to research.

You also spoke about some future rethinking of graduate education and special education. Do you see ways for the process to become a little more responsibile by way of reducing the redundancy among institutions? We speak here at times about cooperation among libraries. How about cooperation among the institutions of which the libraries are a part?

MR. BARTLETT: Immediately, I am pulled strongly in two directions. It is hard to know why the point you make is such a difficult one to respond to, because, on the one hand, the idea of rationalizing your efforts in a period of scarce resources and changing functions has such an immediate appeal to right-thinking intellectuals. To some extent, we could plan and rationalize, and that might give us maximum efficiency in the use of our resources. That point of view is very common among state governing agencies these days. But that attitude actually represents a problem. To far too great an extent, they see the answer to financial problems in rationalization.

You look at the experience of other countries with centrally planned education and research. When you examine the cartel system of universities, where they allocate university systems and functions, you immediately become more uncertain about the wisdom of the "rational" approach. It does not seem to me the outcome of that approach has been particularly desirable. Well then, the question is, "Don't you need a certain element of chaos, or, to put it differently, of competition?" To put it still differently, perhaps you need to structure your system so that the decision-making is closely tied to the experience of people who are actually at the edge of the enterprise, at the point at which the enterprise actually encouters its problems.

One of the problems with these rational systems is that they tend to be structured from the center out. You get people at the center thinking about what ought to happen and surely should happen. But it does not necessarily happen. If you could get the planning mechanism around the other way, so that much of the input came from the edges of the system, so there would be a lot of feedback in the planning procedure, so that the planning was, in a sense, a response which was likely to work, then you might create a system likely to fit our needs.

I was at a meeting not long ago of the Association of University Governing Boards, which discussed higher education. One of the impressive things about the American system of higher education, has been its ability, up to now, to respond quickly to what is happening out there (whatever "out there" means). We have always adjusted quite effectively to changes in student desires, changes in social needs, and the formulation of new kinds of institutions. Since we have really been quite good at that, we never worried about systems that were too carefully planned. That would only reduce our adaptability. We are in interaction with the society -- partially responsive to it, partially critical of it, but always supported by it. In that relationship, we need to have very close feedback from what society is doing.

This comes up when you talk about research funding. Should the Federal government pick out certain institutions and say, "All right, we are going to specialize in one kind of chemistry here, and that institution is going to be the place where we do our Russian language and literature. Over here, we are going to do something else." What happens when you get particular universities dominating the intellectual climate on certain problems? There develops a dogma about, say, soft literature, because it comes out of this school. They know the field. They have the sources, so that is our virgin point of view. These are the people from the university where they know about plasma physics. They are the greatest people in the country, and they say plasma physics should go this way.

We really do have a dilemma in this situation. We need both diversity and a kind of chaotic ability to respond. At the same time we need more legislation for resources. I expect, in the end, we will wind up with some of each. The trend is already in progress in the area of language centers. We are making decisions that there will be fewer of these, and, therefore, each one will become more dominant in that field.

On the other hand, I worry about this trend going too far, because I think it leads to a kind of static quality in the educational enterprise, a kind of German approach, a surrealist time in another time, which is not a good thing.

MR. HAAS: On the question of the professional schools: I can understand how university presidents would see common problems in professional schools. Do the professional schools share the view that they have common problems? Also, are there certain professions that are encountering these sooner than others?

MR. BARTLETT: There is a lot of variation, both among professional schools and among professionals within professional schools of any given sort. That is to say, people in medicine are arguing furiously among themselves (although they are much too discreet to do it in public) about the future relationship of medical schools to universities. I am part of two task forces which are approaching the two principal concerns associated with medical education in different ways (which is one way to suggest how interested they are). Both task forces are concerned with the future of their professional schools and especially with the relationship of those professional schools to the university. But there are two different views. Some say medical schools should be closer to the universities and more integrated with them, and I find that a very convincing point of view. Others say no, for reasons related to state politics, national politics, and the side of medical education connected with hospitals. After all, if you look at the budgets of research universities which have medical facilities, a third of their budget is allocated for medical-health professional education. If that unit is so big, if it has the possibility of supporting itself (as it may have), and if there is kind of a tradition of separateness, many would favor just cutting it off and letting it go its own way.

But take another case, a law school, which says "We are now going to have a sociologist, economist, and historian on our faculty, plus a series of philosophers, because we want to give our students a broader look at the law. The law is a social and organic part of our whole culture. There are lots of professionals now available to do this teaching. The young PhD's are very bright and able, and can teach in law schools." So what do you do when you end up with a law school that has a complete liberal arts faculty? However, it is a kind of institution in which there is a clear hierarchy of subject matter, and what we had thought of as arts and sciences faculty becomes merely the service portion of the enterprise.

Now, perhaps that is a very desirable function. There are people who argue that it is great. That is what they wanted to do with all those narrow-minded, highly technical people after all. Moreover, it provides jobs for the troops. It is a way to deal with an employment problem in higher education, and we are all delighted to see the enlightenment of the legal professionals. On the other hand, if you carry that trend far enough, you end up with a university that is really just a conglomerate, with a director who happens to be

the head of one of the professional schools, who is elected for two years, and who presides at council meetings. But each tub is not on its own bottom. Each tub is its own ship.

The problem is not so much in what this does to professional schools, but what it does to the arts and sciences. When they tell us eight out of ten PhD's in the Eighties are not going to have jobs in the humanities, what is that going to do to the humanities parts of our universities? At least the professional schools are not drying up.

I am overstating everything, obviously, to get maximum attention and to emphasize the point. When you look at the future of professional education, there are some profound issues both within the professional schools and in the relationship of these schools to the rest of the university that are now being argued quite vigorously. In that regard, it should be a rather fertile time.

MR. ROGERS: I was concerned about the statement that the silence with regard to five million dollars funding for Title II-C had been deafening. This organization, and most of the other scholarly organization, have been lobbying and making presentations before Congressional committees. Members of the organizations have also been flooding their Congressmen and Senators with letters. What more do we need to do to be heard?

MR. BARTLETT: You have responded just right. I have a particular reason to say what I did. We have been in touch with the staff of the Congressman who is going to have the most to do with the funding decision on that program. As far as they were concerned, they had heard nothing. As soon as we found out, we talked with John Lorenz, apprising him of that particular concern, because that person and that staff will make a very big difference, on how that issue comes out. I suspect, by this time, they have heard quite a lot. But that was a particular concern -- and I was not really being fair. You are absolutely right.

MR. PETERSON (Southern Illinois): What Congressman?

MR. BARTLETT: Flood.

MR. PETERSON: I wrote him.

MR. BARTLETT: Good. That is what I was talking about. Thank you much.

WHAT UNIVERSITY ADMINISTRATORS WANT TO KNOW ABOUT RESEARCH LIBRARIES

Emmett Fields

MR. FRANTZ: Our next speaker is a university president who knows very well how research librarians operate. He is an historian, and I think we all feel particularly warm towards historians, because we know how intensively they use the collections.

He was Dean of Faculty at the University of Houston, and has been President of the Southern Association of Colleges and Schools. He is now President of Vanderbilt University, and will speak on a topic that has crossed our minds from time to time, "What University Administrators Want to Know About Research Libraries".

I am very pleased to present Mr. Emmett Fields.

MR. FIELDS: I want, at the outset, to extend warm personal greetings -- my own, those of Chancellor Heard, and, more generally, the people of Vanderbilt University -- to the distinguished members of the Association of Research Libraries. We are delighted that you have chosen to be in Nashville. Of course, having driven twenty minutes through the countryside to reach here from my office, it is not clear to me that you are in Nashville.

My assignment is to speak to "What University Administrators Want to Know About Research Libraries". I set you at ease at once, by saying, in this company of old pros, that I would not dare take myself too seriously on that topic. You have heard all the questions by now.

I will allude to some of the questions on my mind, somewhat dutifully, but, if I may, and without trespassing too much on Tom's earlier spoken themes, I would like to set a bit of context by suggesting what is on my mind these days. I would then like to focus on the nature of our historical moment and to think about just what kind of age we find ourselves in at universities. I believe the problems, and special challenges of universities must necessarily also be the special challenges of their libraries.

I begin by the obvious caveat, our principles of libraries grow from a deep, incurable awareness that libraries are central to any stability of higher education. If they be research libraries, they are central to the work of the university and, I would go on to say, central to the faith of the American public. So, I do not want to abandon that basic recognition.

Tom causes me to smart a little bit, since I had already given thought to how I would to define our transitional age, with his reminder that all ages are transitional. Nevertheless it seems to me that ours has special

characteristics, which we must understand very sensitively if we are to adapt adequately. Are our times cyclical or discontinuous? That is the key question for me. We are all perfectly aware that the people in this room have grown up in a bullion age, in which we were conditioned intellectually and psychologically to continue adding and adding and adding to all things, as time wore on.

In the late 1960's, at some point that is probably not possible to define, commenced a historical watershed. We live now in that watershed, in a kind of epoch between epochs. We are attempting now to recover from the exhilarations of the great golden age of growth, and we are attempting to define our somber transitional age for the light it might shed on the next stage to come.

Now, we must come to know the next stage, or at least have some sense of it, in order to have any chance to prepare for it. And I offer you this thought. This is not just another transitional period like all transitional periods. Fundamental breaks have, at times, occurred in world history. That is, fundamental breaks, and it seems to me useful to ask whether we are now in such a period. I again ask the question point blank, "Are our times cyclical in major ways, or discontinuous?" If they are cyclical, we may regard ourselves being somewhere on the down side (appropriately discontent with being there) but moving towards the high side in a return to the familiar and supportive forces we enjoyed before. If the times are discontinuous, what then? It means that the past is not extrapolating itself in some fundamental way or another. But what are those ways in which there is not continuity into the present, and what else may be said of the future?

Well, obviously, when I become prospective, I am well outside my craft as historian. But I have been prospective ever since I became an administrator, more particularly so since becoming President. In remembering my professional years, I will now give you the first question that comes to this President's mind when he is asked about the library. That question is the same as it was before, "Where is my carrel?"

The picture I present to you is on the side of the belief that we are truly in a time of major discontinuity. We are now emerging from the first two American centuries, having been intellectually and, more importantly, psychologically conditioned for two long centuries to growth and expanding geographical frontiers as well as a constantly growing economy. A demographic picture for the United States during this period shows its population growing very rapidly.

Obviously, by now the American geographic frontier is closed, ended. Our economic development seems to be slowing down. And we will see, as a matter of fact, a demographic flip-flop coming upon us in the next twenty or twenty-five years, in which something like zero growth will supplant the heavy growth of previous times. With this flip-flop, there will be many older people and not as many younger people, and that is a matter of grave interest and concern, obviously, to universities.

The energy problems we face, were we to ever have a coherent policy on energy from the United States Congress, would, I am told, take about twenty-five years of massive development and very active work to bring the United States into equilibrium with our world on energy sources. Obviously, we do not have any energy program yet. So, bleak though it may seem, I believe we must look forward to a cooling third-century, in which economic growth and rises in per capita income must grow at a much slower pace than any we have known in the past.

As my next question, I would like to know whether librarians share that view of the future that we must prepare for, and, if they do not, by what argument would they persuade me I can give up this view. Believe me, I say it pleadingly, because I would like nothing better than to be relieved of the burden or expectation I have just presented. I just do not know any facts that sustain a thoroughly optimistic view of our immediate future. The dynamism of the American economy should not be underestimated, and unanticipated technological advances may still occur. But, I now rest in the belief that we should embrace a long-term economic restraint and put our attention to the delivery of those ways by which we may adapt constructively.

This approach has at least the psychological advantages of putting us on the right side of the wrong choice between the cyclical and discontinuous views. Going one way, we risk more than we can achieve, with subsequent damage to our spirits. Going the other, we achieve all that we can risk, and achieve more still if prospects turn upward. That choice, mind you, poses us as a pioneer of some kind of new age.

Now, what may universities do about it? Looking back, remembering the Sixties, it seems to me that, under the surface, one fundamental development we have just lived through is a disintegration of the American consensus. We have set aside the shared sense of goals and values which had characterized our last two centuries, and which saw us staking out claims in the future unrestrainably. We have lost the general public belief that we know who we are and that we can do all the things we desire to do and need to do without making a heavy choice between those two objectives. This splintered consensus is a condition we still live in, and it affects higher education very seriously. I have watched for some years as the Gallup and other polls have tried to identify the spectrum of respect in which various categories of Americans are held, be it doctors, lawyers, or whatever. It leads me to believe that there are no class heroes left in our culture. There is a general sense of concern, a lack of confidence, and that lack of confidence seems to fit the splintering of consensus that I said was a product of the Sixties. This lack of consensus has extended to the purposes of higher education. Quite clearly, we heard talk about that this morning in one particular context, the conflicts between professional education and more general or liberal education. So, there is our first big challenge for the university. We must work for the restoration of an American consensus that fits the age we now enter. It seems to me that we would achieve a higher quality performance with a more constrained set of national objectives than we shall with a wide range of objectives.

Secondly, and more particularly, we must work for the restoration of a consensus within society on what the goals of higher education should be, and we should begin with the higher education community itself. I am not suggesting that all institutions need have the same objective. That would not be fitting to the idea of prioritization, which is a consequence of these choice themselves.

We also need to ponder a very major development I believe we are now in the midst of. That is, a choice between two abstract models of the nature of the university. Shall we be a gateway to the economy, or liberator of the human intellect? My sense of recent years is that we have been rather heavily cast in the first of those two models. Career education has been dominant, and that can only come from a belief that universities should gauge their output (if we may use that word) for students according to the jobs that the economy dictates will be there for them when they graduate. If that is the model we are to accept, then it is very clear we are already materially overproducing in many fields, and we are not likely to be in equilibrium for some time to come.

There is a wide range of exceptions, of course. There are fields which still have high demands, but the fate of Ph.D's is very close to that of the research librarian: We are obviously overproducing. This also seems to be true with respect to many undergraduate fields of liberal arts study. Meantime, engineers, with only five percent of the baccalaureate graduates last year, had twenty-six percent of the job openings, if I recall the number correctly. With this in mind, we need to ask ourselves which of the two models will fit the future? I state my position by saying that we must recover the neglected model, the model of the university as liberator of the human intellect.

Now, finally, a very general message about universities. The time in which we could look forward to the continuation of our budget year by year, more or less taking that budget for granted and exercising our sense of priorities on the margin with incremental funds, is dead. Maybe it should never have been alive, but it is dead now, and we must adopt another point of view. Please, I do not want to be identified with that group of technicians who like the term "zero-base budgeting". But we need some willingness to look to the bottom of the enterprise, to prioritize all old things with some logic and some scale of values against all the new things we are frustrated in doing now. This is not new to you. You have been struggling with that question and doing things about it..

There is an old model, which I do not think we talked about very much, but it worked in the minds of university folk nevertheless. That is the model of the university which suggests that it should attempt to meet all expectations. That model is not alive any longer either as an active course of action for most schools. It is for some universities, if they have already established a wide array of pragmatic activity which is more or less coterminous with the range of the human interest, but even they have a need to prioritize, I would assume. So, I offer instead the model of the compact univer-

sity, which deliberately abjures some things, while adding strength in those things it chooses to make particularly its own. The range of activity still has to be wide enough to deserve the name "university", but some institutions are already more compact than others, and they are observed with respect and pride because they have been able to make the important decisions about what they would not undertake as well as what they would undertake.

Now, with that background, my view of the contemporary challenge for universities, I ask somewhat lamely from this point forward, "How does this apply to research libraries?" There are some existent questions for us all, and for you, the first one, the largest one, does not inhere in the day to day working operations of the library but is a public policy question: What is the role of research to the American society?" Tom spoke of the difficulty of thinking about that in Washington. I get a sense that we have a major problem adjusting to bureaucratic behavior, because it is a subject on which we do not seem to know very much. In a similar sense, there are heavy problems in articulating federal policy, to be sure. But the confusions and uncertainties are there -- I would have to argue -- because the American public consensus on national goals does not exist as a guide to Congressmen in Washington. They have a way, I am told, of responding to the public when the public itself is clear on what its desires are. We must be more accurate, in ways that I cannot suggest, in making not the same old case, but a new case that is adjusted to our real needs unfolding in this third-century.

Now, going on still more, I suspect that, in this new age, there are mental constructs we have found serviceable in the past, on all levels of our thinking about research libraries, which need be reinspected -- reinspected in the best tradition of the liberated person who can stand detached from himself and rediscover. I ask these ogranizational questions: Organizationally, what is the proper mechanism for communication between administrators and libraries? Are our old mechanisms more reflections of a by-gone era than reflections of the era we now senstitively enter? What is the proper form of communication between faculty and libraries? What is the proper participant's role for libraries themselves in university governments? All of that needs to be reinspected.

In some cases at least, it is also very much on our minds that we need corroborative capabilities with other libraries. Living within one of those situations, the Joint University Library, I can say that the benefits of cooperation are many, but an ability to make rapid decisions is not one of them. When I think about talking to Frank Grisham about something it would be desirable for the Joint University Library to do, I have to think about the two Presidents of our affiliate institutions and what they might like. If the day is not quite long enough, I may never get to the question, if you know what I mean.

For another comment, this one on what I choose to call the operational or managerial level, as distinguished from the organizational level, what may we do to cast acquisitions policy so that it reflects our new age? All of us have, in one way or another, been indebted to some unknown, long-since-gone

faculty member as we browse through the collections and discover a rich strike which grew out of nothing more planned than the chance availability of some individual faculty member who was clever enough to put his energy to that purpose. That is splendid, but one does ask, "May we continue in some voluntaristic mode to the degree we have been in a voluntaristic mode?" I have already said that I think universities must be very meticulous in their prioritizing these days for the sake of keeping heat in and addding heat to those limited things they can do well. To what degree may the collections be built in the same mode? To some degree, I worry that it is problematical to recognize what will be appropriate for a later age. But, I do know that if we have not prepared for it, we will be in a devil of a fix with retrospective purchases eating us alive. Librarians must be in the heart of a university's plans, in its prioritization, and I think I can be absolutely certain that, if they are not, some degree of disparity will certainly result between collection planning and the stated purposes of the institution.

Now, a subsection of that section is, "How does the library set its internal priorities, and how much do the chief officers of the university know about the ways in which those priorities are set?" Should that be regarded as a delegated function, which is assumed to be working well unless there are a lot of angry sounds to the contrary? It is not at all wayward for me to say to you that you have an obligation to insist that your deans and presidents know you are doing this, but you also have an obligation to listen to them as they become enlightened. Most certainly, you can bring them beyond the point you now sense them to be.

Concerning another question, that is, scales to determine the efficiency of our operations, I know you do a great deal of comparative characterization between your institutions. You have much in the way of analytic-use studies and that kind of thing. But how much consciousness is given these by the officers of the institution? We share a responsibility there.

Cost containment -- now, there is the slogan of the times. I do not say that at all cynically, because obviously it fits my sense of our historic moment. But what models of cooperative programs are promising? Need we be as reservedly bureaucratic in our responses to them as some of us have been? Must they all be reciprocal in their nature? What kind of resource-sharing operations might we employ or invent? To what degree should university research libraries develop new technology, and at what costs? What kind of on-going and regular analysis of collections might be put on line to buttress institutional planning for an acquisitions policy? What innovative uses may we make of material and human resources? All of those stand on the side of cost containment, which is, I think, inescapable.

On the other hand, on the side of fund enlargement, how do you feel your library appears in the funding efforts of your universities, both in generating private money and otherwise. It is no longer reasonable, at least for private universities, that fund raising be regarded as a special function, a particular property of the president and his development officer. The process

should have centralized leadership and coordination, but it should be accompanied by a decentralized effort involving all persons in the university who have the wit to say the right things to donors.

Still other questions before I quit: What thought and responses should libraries give to new informational media? We wrestled long in at least a lot of universities where computers were not seen as being integral. There are other examples still.

Beneath that, how can we adapt the scheme of training and education that librarians go through? How far away from library science (as heretofore defined) and into information science (that elusive term) must we move? I persist in believing this is something very important, but obviously it is a task of invention to give it its proper directions.

Finally, these closing words, which, in a very general way, speak my vision of how we might move. Universities must be planned more tightly than they have been in the past, for the sake of the preservation of the qualities most dear to each of them. The libraries must be central to that planning. We must be willing to recognize that, if my grand scheme is anywhere near accurate, many of our mental constructions have gone wrong and become subtly more wrong as days go by. We must have the adventuresomeness to invent new ones and cut loose from some of those old ones, even at the risk of some degree of fright.

PERFORMANCE MEASURES FOR RESEARCH LIBRARIES

Vernon E. Palmour

King Research, Inc.

MR. FRANTZ: It is one thing to say what university administrators want to know about research libraries. It is quite another to provide this in a hard-hitting statistical form that will gain attention and respect. Our next speaker will deal with this topic. Vernon Palmour is known to many of you through his many studies having to do with the statistics of academic interlibrary loans. He is a consultant to the National Commission on Libraries and Information Science. Gene Palmour will speak on "Performance Measures for Research Libraries."

MR. PALMOUR: It is a pleasure to have the opportunity to speak to this group again. Today, I would like to make some brief observations about measuring the performance of research libraries.

Performance measures seem to be competing with resource sharing and networking for top billing these days. This is attested by recent articles in Library Journal and The Journal of Academic Librarianship and by my own experience in a series of seminars on library measurement and evaluation I have conducted around the country with Professor F.W. Lancaster of the University of Illinois. Librarians of all types, and especially academic ones, have shown great interest in methods for measuring library performance. I am not sure how much actual measuring is taking place, but the interest exists.

What Are Performance Measures?

What do I mean by performance measures? In defining them, I must distinguish between the amount of effort going into a library service or program, and the results of the service or program. "Performance" measures the results of the effort, rather than the effort itself. For example, you may assign two reference librarians to a particular service point, and they answer, let us say, 1,000 reference questions within some specified time period. The direct input or effort is the staff time of the two reference librarians, and the 1,000 answered reference questions represent the output or the performance. Using this broad definition of "performance" in terms of measuring output, we could further define "measures of effectiveness" as the extent to which performance meets the goals and objectives of the service. "Efficiency" measures the ratio between effort and performance. Most often, "productivity" is treated as being synonymous with efficiency, although I prefer to think of productivity changes at some fixed level of effectiveness. Clearly, we are not measuring the impact or benefit of the service on the users.

Measuring how well a research library is doing is no simple matter, due to the multiplicity of library services and programs, several of which, such as the development and provision of a research collection, are not very measurable. Ideally, we would like a single aggregate measure which adequately captures the total performance of a library. However, no suitable single measure has surfaced yet. Hamburg and Associates recommended the use of a measure (actually several measures) associated with the exposure of library users to library materials. Unfortunately, the procedures to arrive at the estimated "exposure" measures are not operationally desirable or precise. Consequently, they have not been used outside of the study as far as I know.

Given that we are not likely to find a single aggregate measure of total library performance, the next best hope seems to be the discovery of a few measures that capture the essence of library operations. Here again, for reasons I will give later, I do not believe there exists a "universal minimal set" of performance measures ideally-suited to all research libraries.

One other distinction I would like to make before proceeding is the difference between "measurement", e.g., estimating that the success rate for factual reference questions is 55%, and "evaluation", which takes a measurement and attempts to value it. Evaluation is only meaningful in terms of decision-making. In contrast to measurement, evaluation includes the adoption of some criteria which allows a decision-maker to decide something about the measurement. The evaluation process requires some kind of standard, yardstick, or guideline to make use of measurements.

Why Measure Performance?

There is a natural tendency for most of us to want to calibrate how well we are accomplishing certain tasks. If for no other reason, we are curious. A colleague sometimes accuses librarians of lacking curiosity, particularly with regard to finding out more about who is using their libraries. But, measurement should be based on more than idle curiosity; it should be directed at improved management and service.

Quite a lot of the current pressure to measure and evaluate library services comes from outside the library itself. Last year, I was retained by the State Board of Higher Education of one of the western states to assist them in decisions on the future funding of academic libraries. Meeting with the Board members, the Council of University Presidents and Academic Vice Presidents, and the librarians afforded me the opportunity to see the different perspectives on the concerns for library effectiveness. At the top, the Board members were sincere in their desire to find ways to stabilize library growth and cost. They were most concerned about the existing and future needs for physical facilities. The presidents and vice presidents, while basically sympathetic to the needs of libraries, did not appear fully convinced of their needs, in light of the information and data provided to them by the librarians on their respective campuses. Both of these top groups wanted better justification for the library expenditures but were not sure what kinds of information

and data were useful. It was a good example of the need at all levels for more meaningful measures of library performance and of the relationship between levels of performance and cost. You are well aware of the problem. The point is that it is important to communicate both the performance goals and the needs of the library in terms that are convincing and valid within the superior's frame of reference, and it is equally important to demonstrate your managerial ability by showing that past performance has met previously-established goals. This communication should be an integral part of the budget negotiation. My experience is that performance measures should be linked to the budgeting process. Most administrators tend not to be interested in performance in and of itself.

The National Academy of Public Administration provides another indication of the current outside interest in measuring library performance . This organization has commissioned Don King and me to write a chapter on "Productivity in Libraries" for a forthcoming book titled The Productivity Handbook for Local and State Government. The book, with something like 40 chapters covering all types of services, is designed to present the fundamentals of various aspects of productivity improvement and to aid the local and state government management analysts in locating information. In preparing the first draft of the chapter on libraries, I have not included academic libraries. The draft now covers only public libraries.

While outside pressures may help stimulate the need for measuring library performance, the ultimate reason for measurement and evaluation should be improved library management and operations. Performance measures will have to contribute to the day-to-day management of libraries or else they will continue to be a somewhat mystical concept left for consultants (and perhaps an occasional one-shot evaluation project in a library). Library managers need to take the time to consider which of numerous possible measures would be useful to them and then begin the measurement and interpretation on a modest scale. We do not want to make the same mistakes made earlier in some industry and government agencies by designing grand and expensive management information systems which are not used by the managers they are designed for.

Current Activities in Performance Measures

I would like to comment briefly on the current "stirring of the waters" in the area of performance measurement.

Daniel Gore, writing in a recent issue of Library Journal, points out some pitfalls in measuring library performance under the title of, "The Mischief in Measurement." He discussed three measures undertaken in his library, namely:

Holdings Rate:	The percent of books wanted by patrons that are owned.
Availability Rate:	The percent of books held by the library that are available on the shelves when wanted by patrons.
Performance Rate:	The product of holdings rate times availability rate.

Gore reviews the data collection procedures, his findings (90% holding rate, 88% availability rate, and 79% performance rate), and then reviews work of others with similar measures, e.g., the earlier work for public libraries by DeProspo and others at Rutgers. He concludes the article by offering a $1,000 prize to the one library school student who develops, in his judgment, the best new methods for inexpensively measuring Holdings and Availability Rates in both public and academic libraries.

Book availability, as a measure of a library's performance, has been studied by number of persons such as Philip Morse, Michael Buckland, and Paul Kantor. Kantor is currently active in his pursuits in this area. With colleagues at Case Western, he published an article in College and Research Libraries in 1977 titled, "Causes and Dynamics of User Frustration at an Academic Library." Kantor uses four independent measures calculated from a sample of user requests. The measures are:

User performance (e.g., user mistakes at the catalog and shelves)

Library performance (e.g., is book shelved properly?)

Circulation policy performance (e.g., is book circulating or not?)

Acquisition policy performance (e.g., is book owned or not?)

The product of these four factors results in the total probability of satisfaction which corresponds to Gore's Performance Rate. Most of these studies find statisfaction levels of 40-60% in academic libraries.

With an adequate amount of caution, the interpretation of such studies can lead to improved policies (e.g., the duplication policy) and procedures which in turn will increase library effectiveness.

Another recent article (1977) by G. Travis White, in The Journal of Academic Librarianship, provides a broad survey of quantitative measures reported in the literature. It is a good starting place to quickly acquaint yourself with efforts to measure library performance.

One of the more stimulating articles for library managers is by Richard Orr in a 1973 issue of The Journal of Documentation, with a short title of "Measuring the Goodness of Library Services." Orr presents a general framework for considering the relative advantages and disadvantages of different quantitative measures and their use as pratical aids to library managers.

I would be remiss if I did not mention the new book by my colleague F.W. Lancaster, The Measurement and Evaluation of Library Services. It is the most comprehensive treatment of the subject.

Several on-going activities should be mentioned. While these activities are not strictly directed at performance measures, they are closely related. You may have seen the two 1977 reports by the National Center for Higher Education Management Systems (NCHEMS) on a library statistical data base. This continuing project, funded by the Office of Education, intends to develop a data-base structure for the management information needs of libraries. Guided by an advisory committee of librarians and consultants, NCHEMS has identified and defined the elements thought necessary to decscribe a library's environment, the library's resources, and the programmatic activity of the library. For each of the programmatic activities or functional areas, such as user services and technical services, a series of "measure" catagories are used to describe and evaluate the activity of the library. These measures describe revenues/expenditures, personnel, facilities, activity levels, users, and performance or outcomes for each functional area. The NCHEMS project provides a good start towards an operationally useful framework of information and data for library managers.

Another current project with implications for measuring performance in public libraries (and possible future applications in other types of libraries) is one that I am involved in for the Public Library Association (PLA) of the American Library Association (ALA). This project grew out of years of consideration on the part of the PLA Committee on Goals, Guidelines, and Standards to take a new approach to standards for public libraries. Like the ARL and ACRL Committee on University Library Standards, the PLA Committee concluded that existing quantitative standards for public libraries were not adequate for application to the total number and range of public libraries. This is the concern of differentiation mentioned by Mr. Bartlett. The current project, being conducted by King Research, is developing and testing a planning process which can be used by any individual public library to set its own goals and objectives and to evaluate its progress toward them.

The process begins with the identification of the role of the public library in the community and the establishment of some broad goals. Next, the library and information needs of the community are assessed, and existing library programs and services are evaluated, with performance measures being a part of this stage. Measurable objectives and priorities are then established for the library. Alternative changes in programs, services, and policies are evaluated. Once changes are implemented a monitoring system is devised which allows the library to evaluate its progress towards the goals and objectives.

The current project involves preparing how-to-do-it documents with forms and procedures for planning-process methodology. Although the methodology and documentation will then be tested in several public libraries starting this next fall, there will be no standards formulated as part of the current project. Once the methodology is tested and modified as necessary, it is envisioned that the process will be applied in a number of different types of

public libraries. Results from these actual applications will be compiled and analyzed in order to describe the levels of output or performance as a function of the kinds and levels of input. These findings will be the basis for planning guidelines or standards for public libraries. Of course, not all public librarians agree with this proposed approach to new standards.

Finally, I will call your attention to the work of the Task Force on ARL Statistics. This group has completed some interesting analysis using multiple regression and factor analysis in searching for useful relationships among some of the reported ARL statistics. I am sure you will hear more about this from the Task Force.

This is by no means a survey of what is presently going on in measuring library performance. Several of you in this room have contributed to our knowledge and experience in this area.

The Future for Performance Measures in Research Libraries

The question is not whether measurement and evaluation will take place. They already do, but in a limited sense. The real question is how extensively librarians should adopt these management tools. Before I speculate on the answer to that question, let me mention a few barriers to measuring the performance of research libraries. University libraries operate in larger institutions that, for the most part do not use performance measures on any systematic basis. There are various reasons for this, but an overriding one is the difficulty of measuring educational output and relating this to changes in the input and other measurement factors, such as productivity. Consequently, the environment in which many academic libraries operate offers few rewards for such a management approach.

In a few academic institutions where the measurement and evaluation efforts of library activities have started, there has been resistance on the part of the faculty. This is particularly true when measurement and evaluation leads to dropping of periodical titles or cuts in book purchases based on use and cost studies. Support from university administrators could help smooth some of these political problems.

Another barrier of which all of you are aware is the cost, in terms of staff time, of undertaking measurement activities. There are also other risks -- findings may suggest changes with uncertain outcomes. If you are not willing to make decisions and accept the risks, then measurement and evaluation should not be undertaken.

Now, in closing, how extensively should research librarians pursue this art of measurement and evaluation? I believe there is potential payoff, if this is approached on a modest basis, initially. It is best accomplished within a broader planning framework where the measures are related to specific goals and objectives. These goals and objectives are likely to differ from one library to another. Therefore, the same set of performance measures may not be useful in all cases.

The real payoff will come when librarians, not consultants and researchers, get involved in these activities. My experience has been that, when this happens, subtle changes begin to take place in management styles that the managers are not immediately aware of.

Finally, I think more library managers will be forced into the measurement and evaluation process in order to justify their activities. In the future, this will be easier, due to automation.

In closing, I should remove any possible concerns about my earlier use of the term "stirring of the waters" in the area of measurement. I was not drawing an anology to the biblical passage where a pool of water was occasionally miraculously stirred and the first cripple or sick person to get into the pool was healed. Plunging into performance measures does not bring instant healing.

DICUSSION

MR. SCHMIDT (SUNY Albany): I will ask my colleague and friend a question. The last time we convened, John McDonald characterized our pragmatic program reductions at SUNY Albany as "Draconian" and not entirely rational. The real question is, given the resources that are available when you come through a pragmatic priority-setting (or perhaps pragmatic elimination) procedure and given the extent to which disciplines are interrelated, you do not save much if you take out just one member of a disciplinary family. You have to get the whole family off the roster.

MR. FIELDS: Are you talking about our own passionate drama at SUNY Albany? Perhaps, for the benefit of the unenlightened, I will state the context in which Jim stated this question. Until August, I was President of New York State, where Jim was Director of Libraries, and we went through this drama called retrenchment -- an exhilarating experience. It followed on three or four years of girding for the state response to the fiscal cloud. During this period of preparation, SUNY Albany never actually lost money relative to previous years, but, relative to the previous growth rate, it was rather devastating.

The university had responded for those several years by the even-handed dribble technique of withdrawing funds undiscriminatingly, wherever they might be found. Fortunately for me, the faculty had developed the view, prior to my going there, that the dribble approach would no longer get the job done. The faculty recognized that selective cutting should be the order of the next day, as we began losing nine percent of our money absolutely in a period of three years.

We did the cutting by reducing the number of degree programs from 127 to 109. That was the plan, and it was accomplished by a task force of faculty, who rose to the occasion I am pleased to say. I validated their findings, having participated with them. There were several meanings of this. For

example, Jim no longer had to acquire collections for nursing, because we no longer had such a program. It was phased down over three years, so all students could get all the way through pipeline. The pattern was similar for speech pathology, audiology, and all the others.

For awhile, it also appeared he would no longer have to pay heavy attention to Italian students, because we were eliminating two degree programs there (the only ones we had on campus), though it was thought suspicious by some that we did not have any students in these programs. However, these two programs were, in fact, saved. They were the only ones that were saved of the twenty we had sought to eliminate. That salvation is not unrelated, I think, to the fact that the General Assembly of New York includes forty-two Italian-Americans who took considerable interest in the matter and saved the operation in a gracious way. They gave us one-hundred-and-fifty-thousand dollars on top of what we already had, which was kind of funny, since we were only extracting forty-two thousand dollars by eliminating the programs. Someone asked John Schumacher where he got that number, and he said it is a symbolic number, which in New York is taken as a sufficient answer from the Chairman of the Senate Finance Committee.

Now, I really am serious when I say that program contraction is not everybody's solution. There has been a lot of quick growth, and some of it was very good at SUNY Albany. But SUNY did grow very rapidly, so not all of it was eminently respectable. Thus, it could be sacrificed without material loss, I thought. But even so, it was not any fun. Maybe necessary, but it was not any fun to contract simply for the sake of balancing the budget. We approached subtracting twice as much as necessary for the upcoming budget year. Whereas, in the beginning, we had no faculty positions for reassignment, we ended up with fifty-nine or sixty-five -- I'm a little vague on my numbers now -- but a sizeable number of faculty positions, and I do believe it was good for the library, or could be good, because Jim could acquire on a more narrow front. Does that respond to your question?

MR. BLACKBURN (Toronto): I have one question for Mr. Palmour. I want to express some relief that university libraries have been exempted from his chapter, especially the user satisfaction index. I imagine most of us could probably improve the user satisfaction index if we cancelled three-quarters of our subscriptions and quit buying any books not in English, but it would also kill our research programs. So, I do not want to teach our board members that this is the way for us to go.

Part II of the Program:

FREEZING CARD CATALOGS

OVERVIEW

Richard Dougherty

MR. FRANTZ: I suppose there is no other question on our minds more constantly than what we will do about the card catalog. We felt this was an appropriate time to build a program around this topic, and the Board turned to Richard Dougherty to organize the program. We were delighted that he accepted, and I am happy to turn this morning's program over to Dick.

MR. DOUGHERTY: When I was asked to organize this meeting, I was reasonably conversant with the topic, at least superficially, because we had been talking about this at Berkeley for three or four years. We anticipated that, at some point in the future, the Library of Congress would probably move to close its card catalog, but I really did not know what was going on in the profession at large. So, I distributed the briefest possible questionnaire. I think there were only three or four questions. Basically, I was asking, "Had the library made a decision, and what problems did the library administration anticipate?" Finally, I asked a brief question about the possibility of faculty or staff resistance to the changes. I received about sixty responses to the questionnaire, some very brief, some very detailed and thoughtful.

Rather than spend much time summarizing the results, I thought I might begin our program by very briefly giving you what might be characterized as the typical library profile. This probably will not apply to your library, because you are not typical, but do not be disturbed by what I say. Others should be disturbed.

Your library has probably decided to close and to adopt AACR 2. Planning in your library is at a preliminary stage, in some cases very preliminary, but it is beginning to intensify. Planning can best be characterized as "problem identification" rather than "problem resolution". There seems to have been a tentative decision to adopt COM catalogs, but the details of doing it have yet to be worked out.

Those libraries that are members of OCLC plan to use their archival tapes to build a new data base, and those libraries seem to assume that they will have the capability to update their archival tape to reflect the new rules. There is a general hope that an authority control system will be available. There does not seem to be any firm decision whether your library will engage in retrospective conversion, or, if you have decided to convert, you have not decided how to do it or how many records will be involved. Your library does not seem to be overly concerned about costs, either implementation costs or costs of operation, but that is probably beginning to change as the date gets

nearer. The costs of implementation and operation are not yet known. There does not seem to be any great fear that faculty and staff will resist the changes. At the same time, it does not seem that the campus community is yet aware of what is going on. Well, that is just a snapshot of the status of the typical ARL library.

The results of the survey were interesting. I will have to say they were non-scientific. I have done a sort of rudimentary analysis and will try to include some of the results in the proceedings of this meeting (See Appendix A).

Now to the main part of the program. When I was asked to organize the meeting, I was not really interested in the technical details or the logistical problems of closing card catalogs. I asked each speaker to address his topic from a particular viewpoint, namely, "How is all of this going to affect you and me, the library director?" I am not going to worry about the acquisitions people, the reference people, or the catalog people. I am more worried about the director during this program.

It was not easy to select speakers. Joe Rosenthal, who is Associate University Librarian at the University of California at Berkeley, has been active in ALA cataloging circles, and I think, without question, he is our resident authority on closing the card catalog. I think he is probably one of the national authorities. Certainly, Joe has been very much involved in coordinating our planning on the Berkeley campus.

Robert Blackburn is special because Toronto has done what most of us are now talking about. I think we can all learn an awful lot fom his experience.

Bill Axford has also closed part of his card catalog, the subject catalog, and I think he can share with us a very personal view of what some of us are likely to encounter when we close a catalog.

Finally, if you will note in the program, it says something about a panel. Since all ARL members are accustomed to speaking extemporaneously -- and in the spirit of trying to create a feeling of spontaneity -- we have not yet selected the panel. I will select the panel at break time, so you may be tapped. As a friend of mine once told me, when you are asked to participate in ARL, you never refuse.

PLANNING FOR THE CATALOGS: A MANAGERIAL PERSPECTIVE

Joseph Rosenthal
University of California at Berkeley

Unexpectedly, the federal government will soon become a major source of assistance in helping us face a future dotted with frozen card catalogs. I refer not to Title II-C or to the Library of Congress, but to a hitherto little-known agency within HEW which is issuing a new series of pamphlets and other aids for non-profit organizations. The initial group of items includes the following titles:

-- "How to Reduce your Library Fuel Bills through the Use of Pulverized Catalog Cards"

-- "Remodeling Card Catalog Cabinets into Cathode-ray Terminals, Microfiche Reader-printers, and Planters", and what will probably be a best-selling video cassette:

-- "Retraining Filers for Library Management Positions."

A few cautionary notes and a brief indication of coverage might be in order at this point. Some of the allegations made in this presentation will be unaccompanied by supporting data or back-up rationale, not for lack of either, but because of the constraints of time. Similarly, the statements made should be understood as admitting of exceptional circumstances which can alter some of the conclusions for one or a few particular research libraries. This will often be the case for such libraries as the Library of Congress, the National Library of Medicine, or Linda Hall.

In the next twenty minutes or so, I would like to speak about some of the major ingredients of the bibliographic prospects for research libraries during the next few years, to touch on some of the data which either is available or is needed for planning and decision-making, and to interject along the way a few recommendations concerning both the means for arriving at decisions and (to a very limited extent) the content of those decisions.

An underlying assumption here is that most of the research libraries of North America are either participating in or about to join a machine-based bibliographical processing system.

Let's face it: chronologically divided catalogs constitute a fact of life. With the issuance of the second edition of the Anglo-American Cataloguing Rules and its subsequent implementation by the Library of Congress, the rest of us cannot afford to maintain cataloging practice according to AACR 1. There is, of course, the option of perpetuating a single card catalog while adopting AACR 2, but, as John Rather and others have pointed out, this is simply a masking device for maintaining two sets of files within one physical

entity. As time goes on, an increasing number of name headings will be represented in the file under two different forms. The tasks relating to linkage of the different forms of headings are similar, though not identical, whether a library chooses to split the catalogs at the time of implementation of AACR 2 or decides to maintain a single catalog indefinitely.

Apart from the issuance of AACR 2 and its implementation by LC, it is increasingly evident -- in light of present and future technology -- that card catalogs are a costly and relatively ineffective means of bibliographic display for large collections. Cards require large expenditures of manual effort as well as indefinitely expanding space, and the expenditure curve for maintaining card catalogs rises as the size of the files increases. Book catalogs for large collections are likewise relatively expensive to produce, and they present difficult choices between large financial outlays for frequent updating and recumulation or else user frustration over the need to consult multiple alphabets or segments in comprehensive searches. On-line access -- FOR CERTAIN TYPES OF QUERIES -- has a great deal to offer. It is, however, very expensive, it presently offers limited search capability, and generally speaking, it will not be feasible for most research libraries by January 2, 1980.

This brings us to computer-output-microform, a medium which is operationally viable, cheap, and highly acceptable for many users and many types of use. Regardless of the development and implementation of on-line access, COM should be considered as an effective display mechanism answering a considerable portion of bibliographic queries for some time to come. In any case, I believe it will be obligatory as a backup to most on-line installations.

With COM as a practical display mechanism, two other factors -- if available -- would make the closing of any research library card catalog a breeze. Unfortunately, few of the libraries represented here will have either of these features on hand by 1980. They are:

1) an authority control system providing automated linkage back and forth between bibliographical records and the established forms, together with their associated cross references of names and subject headings embedded in those bibliographic records, and

2) a completely machine-readable file, i.e., a catalog which is already converted into machine-readable form.

I would like to spend a few moments on each of these concepts.

The authority control system, first brilliantly executed in a computer milieu at the New York Public Library, holds the greatest promise of allowing us to overcome the problems posed by the second edition of AACR and, perhaps more importantly, to deal with future changes in cataloging policy and practice over the long haul. Devoutly as we might hope, it now seems certain that the Library of Congress will <u>not</u> have a well-functioning on-line authority control system linked to its machine-readable bibliographic records by the beginning of 1980, and, unless a miracle occurs in the next 18 months, the

name headings in the MARC files at LC will, in large measure, not be compatible with forms called for by AACR 2, notwithstanding a valiant attempt at LC to build in the changed form of names manually between now and Day One.

Of equal consequence is the present inability of two of the major data processing utilities, OCLC and BALLOTS, to cope in machine-based or automatic fashion with the problems of linking changed forms of name headings and associated pre- and post-1980 bibliographic records. To my knowledge, neither system has announced a strategy for dealing with this set of problems as it affects the files at Columbus and Palo Alto, much less the consequences for users which will become all too quickly apparent at libraries throughout the United States.

UTLAS, the University of Toronto Library Automation Systems, seems to be well on the way to developing an authority control system, and WLN, the Washington Library Network, is the first major processing utility to offer this capability on-line. Utilization of an effective authority control system should go far toward reducing the unpleasant bibliographic and financial effects we can anticipate with implementation of AACR 2.

As has become evident at the University of Toronto, an integrated file of machine-readable bibliographic records representing nearly the complete library collection has been a significant factor in mitigating the difficulties otherwise faced by users in accessing two separate files. Since the same would be true for other libraries, it would be of some interest to look at the individual and collective prospects for conversion to machine-readable form of retrospective bibliographical data. To begin with, John Knapp has put into a handy little algorithm some guidelines for individual libraries considering retrospective conversion. For libraries holding fewer than 250,000 titles, chances are that quite a high proportion of their titles will already be available in machine-readable form, and a conversion project utilizing access to an existing large machine-readable bibliographic file should probably prove to be cost beneficial within a matter of a few years. The choice is not so clear for libraries holding between one-quarter and one-half million titles, Mr. Knapp believes, and for libraries holding more than one-half million titles, the decision to convert retrospective files on an individual institutional basis is probably not economically justifiable at the present time.

Two important provisos should be attached to these guidelines: First, the economic feasibility of retrospective conversion is changing on an almost monthly basis because of 1) the de facto growth of files, 2) changes in methodologies for inputting and verifying bibliographic records, and 3) changes in the machine/manual labor cost ratio. Second, the economic constraints and costs applicable to retrospective conversion undergo significant change when contemplated on a multi-institutional basis. For example, the major libraries of the province of British Columbia are embarking on massive and comprehensive retrospective conversion. The disposition to act in concert, coupled with a history of favorable relations between libraries and the provincial government, has led to substantial backing for this program. Imaginative library leadership and a history of successful applications of machine techniques bode

well for the enterprise, which is utilizing the UTLAS system and its bibliographic files as the basis for conversion.

The UTLAS file, along with those of Blackwell/North America and OCLC, are some of the major data stores which might be given consideration for retrospective conversion programs. Each of the files has its own quantitative and qualitative characteristics, and these, along with the charges for utilizing any particular file, should be very carefully evaluated before any library or group of libraries begins retrospective conversion. After the RECON studies and reports in the early 1970s, the Library of Congress decided that conversion of LC's main retrospective files would not be afforded a high priority. Breakthroughs in the technology of optical character recognition might drastically change the economic parameters of this situation and ultimately the policy of LC. In any event, I suggest that the early 1980s, with a decade of development since the RECON work, might be an appropriate time for reexamination by LC of the possibility of converting its manual bibliographic files.

To return to the more common situation of "no automated authority control system" and "massive retrospective files in manual form", the Berkeley planning document (See Appendix - B) is intended to give some idea of the number and variety of decisions -- mostly technical -- which research libraries will encounter. Perusal of these questions and decision points (and I do not intend to discuss them seriatim) should make it apparent that a great many of our anticipated problems would disappear with the operational availability of the two features just described: authority control and retrospective conversion.

I would like to go over various categories of data which I feel may be useful, individually and collectively, in making some managerial decisions regarding future systems of bibliographic display and access. To begin with, an account of the costs of present personnel, equipment, space, and maintenance is essential, and extrapolations of these costs, based on the prospect of maintaining the current processing system without significant change, should be valuable in developing justifications for future action.

A listing, description, and quantitative analysis of all present catalogs and other files of bibliographic records (with accompanying growth rates) should be developed, if these data are not already available. If it seems likely that planning will include the possibility of on-line and/or microform displays of bibliographic data, an analysis of spatial requirements and capacities at appropriate public and technical service points and a determination of power and telecommunication needs and capacities will probably be necessary. As an adjunct, cost estimates should be made for bringing present capabilities up to anticipated requirements under a changed system.

Though it may be difficult to obtain, I believe it would be very useful to have some indication of peak load, in terms of queries by staff and other users of the present bibliographic files. If at all possible, we should also try to break this estimate down by type of query and by the length of time spent examining or perusing the file. In other words, how many people are apt

to be using the present bibliographic files at any one time? How many of these users are making a "known item" search versus a subject search? Approximately how long do they spend at the catalogs for any single search?

The Library of Congress has estimated that approximately 49% of the existing MARC records will need to have headings updated to bring them into line with AACR 2. We do not know how to apply this projection to the records of any library other than LC, and we have very little idea how many of the name headings established after 1979 will constitute changes to previously established forms. For example, how many of the name headings encountered in 1980 by the catalog department of a university research library (with a collection of two million volumes and an annual cataloging rate of fifty thousand titles) will need to be reconciled with different forms of names established prior to the implementation of AACR 2? Three thousand? Ten thousand? Twenty thousand? What will happen to the rate of "changed headings" during the first five years of implementation of AACR 2? Will the rate of change decrease, and if so, what kind of declining curve will it follow?

We have few guidelines to tell us whether these changes are likely to have more, less, or about equal impact on monographs and serials. Such information might be valuable as we allocate staff and organize our libraries for processing serial and monograph materials, particularly in view of the serials holdings and intake in a particular collection. For example, Berkeley, which has long prided itself on the massive strength of its serial holdings, 65% of which are entered under corporate body, is particularly concerned with the AACR 2 rule changes as they affect serial publications.

For longer range planning as well as the immediate prospect of closing card catalogs, data enabling us to project the amount and cost of on-line usage of bibliographic files would be enormously helpful. There would seem to be a large number of variables associated with the quantity of on-line queries: size of file, ease of access, nature of the instructional and research programs, training and assistance provided for users, declining costs of computer storage, and other factors. Manipulating estimates of all of these in order to provide a projection which would assist a given library in allocating funds for on-line terminals at its public service stations is probably about as difficult as fashioning a Leontief matrix for the Gross National Product. Nevertheless, even a crude handle on these costs might give us a rough basis for budgetary projections of what will certainly be an important aspect of library service.

In company with any other major change in library operations, the closing of library card catalogs places library administrators at the center of various categories of constituents, and thus poses delicate questions of political and public relations strategy. The cast of characters is familiar: user groups from the academic community such as faculty, students, and staff. Certain other users should be considered as well: borrowers of library materials through interlibrary loan, particularly borrowers from institutions with which a given library has formal network connections. By no means the least significant set of relationships is that which the librarian has with the

institutional (that is, the university) administration. In Bill Axford's presentation, you will get the flavor of this particular component of bibliographical change. Most of you are more than cognizant of the public relations role played by library administrators. This familiarity leads me to limit remarks on the topic to a short reminder: previously established rapport, or the lack of it, with these various constituencies will contribute a good deal of the kind of reception given to plans and proposals affecting our present systems of bibliographic display.

The Berkeley planning document exemplifies an attempt to involve library staff members in the planning and decision-making process. Despite what may seem to some administrators a troublesome inefficiency engendered by dispersed responsibility for decision-making in this area, the widespread participation of staff -- professional and nonprofessional, public service as well as technical service and systems staff -- can and should offer a series of pay-offs. Staff involvement should enhance the intrinsic quality of the planning. In a complementary fashion, the process of planning should lead to increased awareness and knowledge among a large segment of the library staff. Most importantly, it should strengthen the quality of library service during a period of dramatic bibliographic change because of staff commitment to the implementation of plans resulting from group effort.

In the foregoing remarks I have tried to outline some major concerns most of us face in contemplating the closing of library card catalogs. Some of these concerns are institution-specific, but others are general, and could well be addressed by the research library community acting in concert. The investments we have made individually and as a group in our bibliographic files are sizeable -- in almost any league except perhaps AT&T, General Motors, and the U.S. defense budget. Even on an annual basis, the combined costs of our processing operations are in the neighborhood of $200 million.

There may be a few operations that will not be affected by the closing of existing card catalogs, but I would find it difficult to name more than half a dozen. Most technical service functions will feel the impact immediately and seriously. Even more significant will be the reverberations in the area of public service and the costs of those operations.

It is disquieting to realize that, while most of us are aware that the closing of card catalogs will be a major event in terms of costs, quality of service, organization and deployment of library personnel, and reactions from users, we have a very imprecise idea of the nature or extent of the consequences. Lucia Rather of the Library of Congress remarked at LC's excellent presentation at ALA Midwinter that one of the recurrent fears within the group of staff members planning for LC's freezing of its catalogs was that a completely new and unanticipated result -- one for which there would be no obvious solution -- would occur in the period immediately after the official freeze and the beginning of a new era. This could certainly happen. All of us will probably experience a few rude shocks as we pass through the coming retooling of our bibliographical systems.

In retrospect, the kind of managerial attention illustrated by this morning's program should have begun with the decision in the early 1970's to proceed with work on a second edition of the Anglo-American Cataloguing Rules, or even earlier in the previous decade, when Bill Welsh and others at LC began to examine the possibilities of changing the structure of LC's catalogs.

Despite what we might have done, I am inclined to regard the bibliographical horizon, on balance, as very promising. There is work cut out for us all. With some diligence and imagination, we need not lament -- with sackcloth and ashes -- the closing of card catalogs. Quite the opposite -- the future holds for us the exciting promise of truly opened catalogs.

TWO YEARS WITH A CLOSED CATALOG

Robert Blackburn

At the University of Toronto Library we have closed our main card catalog twice so far, once in 1959 and again in 1975. I mention both times because there are some instructive differences and parallels.

First Time Around

Up to May 1, 1959, our Library had collected nearly a million volumes, which were classified in a simple homemade scheme which had undergone so many generations of improvement that it was tying itself in knots and was clearly not a suitable structure for the large expansion which the University could then foresee. In preparing for expansion, the University decided to call in an expert to help assess our future needs for library space. For a consultant we managed to get Steve McCarthy, who at that time was running the biggest reclassification project we knew about.

In the two days Steve was on campus, our chief cataloger found an opportunity to introduce him to our catalog, with its nonstandard filing rules and rules of entry and its local classification scheme which had been authorized by our academic Senate's library committee in 1891 (actually the scheme, had been invented by our first Librarian one weekend after a short visit to Cornell). Steve's report included a strong recommendation that we adopt Library of Congress classification, and we did. This was back in those happier days when a President who liked a report could float it past the academic Senate one evening for approval in principle and tell his librarian the next morning that there was money to begin a large reclassification and recataloging project. It did not happen quite that easily, but almost.

The reasons given and accepted were the ones we really believed: a new catalog based on standard headings, filing rules, and classification would bring about such an improvement in the efficiency of technical services and in the effectiveness of reader services that it would justify the cost of reclassifying the most active parts of the old collection. It would also justify the inconvenience of having two catalogs and two collections in the stacks.

Reader reaction came mostly from the teaching staff, some of which opposed splitting the stack collections into old and new classes, but the opposition mainly took the form of pleas for certain subjects to be given priority in the queue for reclassification. As far as the two catalogs were concerned there was little reaction from readers, except that we found ourselves explaining, occasionally, why it was not feasible simply to interfile the two. The people most worried about having two catalogs were our own staff, especially the searchers and reader-service librarians, and there was a good deal of groaning when we finally had to drop the reclassification project about half way through because of costs.

The remains of the old catalog, which was closed in 1959 and then dwindled until it was finally frozen ten years later, are still with us, off in the corner, but, if we had not closed it when we did, I do not think we would have got through the expansion of the past twenty years as well as we have.

Second Time Around

By 1975, we had card catalogs representing close to four million volumes located in the central library (which is divided between two major buildings), about 30 departmental libraries, and two suburban colleges. Most of these were represented in the "new" central card catalog, but some only in special files, or the old catalog. The split which occurred when we moved into the new Humanities and Social Sciences Research Library in 1973 left the Science and Medicine Library without a proper catalog. The two suburban colleges, founded in the early sixties, had limited their libraries to teaching collections on the understanding that their daily delivery service would be assisted by their having copies of the central card catalog. In spite of the number and variety of card catalogs we were supporting, the University still had inadequate bibliographic access to its collections. Our University was not unlike most other large, oldish institutions in that respect, but we did have one additional problem that was fairly unusual. We had about 1.2 million machine-readable records.

Back in the early sixties, we began to have what might now be called presentiments of Baumol and Marcus, and we began converting our records into machine-readable form. We saw a mechanized file 1) as the best hope of integrating our various catalogs some day and of making them more widely available, 2) as the essential basis for mechanizing many of our operating routines and eventually superceding most manual records, and 3) as a means of tuning in on future methods of exchanging information.

By the spring of 1975, the converted records covered both our old and new catalogs. About that time, we also began making full MARC records for our current cataloging and using them to produce catalog cards. In our budget planning, we recognized that we were reaching the point at which we could no longer keep building a complete card catalog as well as a machine-file that was being used only for special purposes. To begin preparing for that time, in February 1975 we appointed an Implementation Team for Data Base Integration and Application, under the chairmanship of the Systems Librarian. Data-base integration was necessary because our file conversion had begun in 1965, before the Library of Congress and the National Library of Canada had announced even their initial MARC formats. Consequently, our conversion project had gone through an evolutionary process and had given us at least five separate files which had strong family resemblances but were not really compatible.

Then, in June 1975, the University's budget letter notified us of a five percent cut in operating funds for the following May. The time had come to make a choice between our card catalog and our data-base. We decided to close the card catalog, and we had just under twelve months in which to do it. We

did not know of any academic library of our size having done such a thing before, but we were prepared to move in what seemed to us the right direction, even if it meant we would have to break a new trail.

Deciding and Preparing

In 1975, we treated our decision to close the catalog entirely as an internal management decision, based on our need to meet a cut in the budget. There was input from Library staff, because by that time we had our internal Budget Committee, which includes nonadministrative staff from each library division as well as our senior managers. The decision was incorporated into the notes of our final budget submission, and, in this form, it received the blessing of the University's governing body. At that stage, there would have been no point in either consulting other parts of the University or making any general announcement of the closing until we had had time to work out the details of our alternative to cards.

Obviously, there was a great deal of planning and preparing to be done, and all parts of the library operation would be affected by the outcome. Fortunately, our Implementation Team on Data Base Integration and Application had the right mix of expertise among its members and had shown that it could work as an effective team on this kind of problem. So, its assignment was extended or particularized to include preparation for the orderly closing of the card catalogs and the provision of an adequate and economical computerbased alternative.

As the Implementation Team began to identify the specific tasks to be performed, it began to set up subcommittees with the necessary talents and with deadlines to fit the timetable. Eventually there were seven such subcommittees. The Team was also advised by three advisory groups, each appointed by one of the advisory councils which exist in the three operating divisions of our Library.

The Implementation Team explored, recommended, and carried out plans within the boundaries set by existing policies and budgets. Its work made necessary a whole series of complicated decisions which had to be made before the work could proceed. As Chief Librarian, I already had a large staff Advisory Council to consult on matters of policy, and I established a smaller Planning Decisions Group to help me deal with other questions raised by the Implementation Team on Orientation and Training, whose mission was to plan and carry out a program designed to inform the Library's staff and users and (as one of its terms of reference stated) to minimize the spread of wild rumors. The object of this apparently complex organization was 1) to ensure that the outcome would be based on wide discussion of the best information we could muster and 2) to meet the deadline.

We had said that our long-term objective was a fully-automated on-line catalog, but it was reasonably clear from the beginning that our immediate alternative to cards would have to include some computer-out-put microform.

We knew it was not yet practical to have our full data-base on-line, and we did not know how the users of our Library would react to the idea of an online catalog. We did experiment with this last point during the year, by mounting four public terminals with direct access to an abbreviated shelf-list of our LC-classed collection. We found that many readers -- professors as well as students -- used this particular on-line file with enthusiasm and wanted little or no help beyond the dozen lines of printed instructions. In fact, the response was so positive that, right up until the final estimate of costs, we did plan to include some on-line component in our first alternative to cards.

We had had enough previous experience with bookform catalogs made from computer printouts to know something about production time, duplication costs, and update timetables, and to know that we did not want to go that route with the full catalog, though paper printout might still be a possibility for certain limited puposes. But whatever hard-copy or on-line components might be included, it soon became clear that COM would have to be the mainstay in our initial alternative to cards.

Naturally, any talk of an alternative to the card catalog raised cries of dismay and panic in various quarters and some predictions of doom. However, we had decided to close the catalog. By our definition, closing meant what it had meant in 1959: to stop making additions and to remove and discard full card sets when any change was made to a record by way of correction, added copies, transferred copies, and so on. That is, the catalog would remain correct, though shrinking, and all changes and additions would be reflected only in the new computer-based products. This is a definition which is now being reconsidered, but it is the one on which we have proceeded. Of course, we had to go on adding cards for categories of records which were not yet in the data-base, such as humanities serial holdings and union-catalog entries based on reports sent in by other campus libraries. Naturally, the whole card catalog would continue standing in its usual place, without any chains or padlocks on it, and we thought most people would continue preferring it for a long time as their first place to look.

Because the COM catalog was to be our new mainstay, we wanted it to be as complete and easy to use as we could make it, and we wanted it to have at least some advantages over cards. For reasons having to do with security, distribution, and cost, we chose to use both film and fiche. I will not attempt to recount the debates about whether and how to divide the COM catalog: in the end we agreed to have four separate divisions, so that we could watch and see which parts were actually used most often. We decided that the full bibliographic record (FBR) would be arranged by call-number, thus providing a kind of classed catalog which had not been available to the public in our cards. In addition, there would be three indices: one for authors, one for subjects, and one for titles. The initial letters in the names of these four files happened to provide the acronym FAST. This could be taken as a good omen, and eventually it was used as an acrostic in some of our publicity.

The number and distribution of microcatalog sets also represented a difficult question. For our Library departments, having their own sets was one

of the best selling points for COM. The same was true for all our branches and departmental libraries and the other libraries attached in any way to the University. We were eager to take advantage of this fact, since it represented a real breakthrough in bibliographic access, but we had to consider how many sets would really be used to good effect and how many we could afford to supply and maintain? Eventually, we agreed to have 32 catalog stations in those parts of the library system which are administered within the budget of the Chief Librarian. These stations varied from large ones with up to 17 viewing machines down to small, single-machine stations.

For other established libraries within the University, we offered one fiche-viewer each as a free introductory offer, if they would undertake to buy copies of the fiche catalog at cost. By the end of the first year, there were 35 such additional catalog stations on campus, making 67 in all.

Some Discoveries

We ceased producing catalog cards at 5:00 p.m. on June 30, 1976, just one month after our initial target, and we began receiving COM catalogs eight weeks later. We recognized in advance that there would be imperfections, and, to disarm potential critics, our publicity materials invited them to help us by reporting any mistakes they found. Many users responded to this invitation with real enthusiasm. Their reports included not only the anomalies which resulted from faulty input, bugs in the program, production flaws, or differences in coding which had not been eradicated in the mechanical integration of our files, but also the spelling errors and other oddities which had gone undetected for years in the card catalogs. It seems that mistakes, along with other kinds of data, are more easily scanned and spotted in a sequential column than on cards.

As errors were corrected, they were fed into the monthly cumulative supplement. At the same time, we were beginning to put some new categories of records into machine form, such as our special listing of government publications These too went into the supplement. These were all in addition to our regular catalog input and adjustments, and, once they had been put into the supplement, they were repeated each month. After the third month we decided to economize by omitting the blank line which we had allowed between entries. Later we decided that minor corrections which did not affect filing should not be fed into the supplements, but displayed for the first time in the second full edition. Even so, our total production for the year overran the original estimates by about 60 per cent, and, in the second year, we have gone to two-monthly supplements.

Perhaps the rapid expansion of our supplement was caused by circumstances peculiar to our library at that time, but I suspect that any library, at the time of closing its card catalog, may have a similar experience and should allow for it.

The Closed Card Catalog

The supplements were related rather closely to the card catalogs because, as I mentioned earlier, we had decided that sets of cards were to be withdrawn when any change was being made to a main entry and the updated entry was to go into the supplements. This meant withdrawing about 2,000 cards a week, and this has created some problems. Readers who were still using the card catalogs sometimes missed cards which they knew they had seen before, and they complained. Our effort to close the card catalog down systematically, keeping it correct by withdrawing obsolete records, is not appreciated by the readers and is costing staff time. The whole question of card files is under review again, and our handling of them is likely to change.

Costs

Concerning costs, it is very difficult to know what to say. Certainly we have no clear-cut before-and-after comparisons to make, no detailed accounting of a sudden shift from manual methods to full mechanization. We have mechanized the access to the catalog, but, for bibliographic control, we still use manual files. We are still working on the card catalog itself, closing it down, still adding certain things to it, still keeping up some special card files, and still planning to convert some of them to machine form. And of course, we are still learning how to reduce the cost of running the COM catalogs and how to use them more effectively. There are so many complicated interactions between the COM catalogs and other changes which have been made (or are in process) that it is not possible to say precisely what the COM has cost or how many dollars it has saved or will save.

We can, of course, put a price on certain things. As a very minor instance, the Reference Department eliminated one of the two telephones at the catalog information desk, because the main catalog is now available in so many other places. A more significant saving arose out of eliminating the production of something like 400,000 catalog cards a year. This process had been automated for some time, so the saving was simply transferred to a different kind of computer output. Another sizable saving grew out of the fact that cards which are not produced do not have to be filed. This fact was so obvious so early that it typifies the special management problem posed by savings which involve people. Naturally, the staff in our filing section began to feel rather unwanted as soon as our intentions were known, and competed for transfers to any suitable openings which occurred in other parts of the Library. As transfers were made, we had more and more of our filing done by student help and other part-time staff. We had assured the regular staff that those left in the section would be offered equivalent jobs elsewhere in the system without loss of pay and with whatever retraining was needed. When the time finally came, there were only three filers left to be resettled in this way, and their retraining would count as a minor cost of the microcatalogs.

On the basis of estimated throughput and a year's experience, our Library's planning and budget committee has fitted the various aspects of COM

production into a tight automation budget which includes several other operations and preparations. For COM production, our second-year expense is $156,000, about eleven cents times the number of shelf-list records we shall have by the end of the year. To summarize the first-year costs, I can say that we absorbed a five percent cut in the total operating budget of the Library, closed our card catalog, opened a full-scale COM catalog and adjusted to it, distributed it on film or fiche to 67 stations in the campus library system, and survived.

Orientation Of Users

Adjustments to the idea of COM catalogs began as soon as we decided to close the card file. It began with the staff, especially those who might feel their jobs were threatened, and all those who could not really imagine life without a foundation of three-by-five cards. We put the early announcements into our weekly staff news sheet, but soon realized that something more was needed.

About eight months before the target date for the great change, our Implementation Team for Orientation and Training began to issue a special news sheet to the staff whenever there was progress to be reported. The Team's publicity built up to an hour's meeting with all library staff (in four sections) to review the whole project and to prepare the staff for its first chance to use samples of our catalog on fiche and film. Training sessions were held for a number of people who acted as instructors, and those individuals in turn gave practical instruction to the whole staff in groups of five or six. I went to one of these sessions and began to wonder whether our information program had really made the whole business seem too formidable: When the participants finally got their hands on the viewing machines, everyone seemed amazed and relieved at how simple it was.

The same Implementation Team worked out a schedule of publicity directed toward library users, carefully planned to give out basic information and not to create either alarm or unreasonable expectations. When one major teaching department showed signs of becoming restless, two members of the team visited and offered reassurance. We sent two special mailings to all teaching staff, placed a few articles and notices in the University's weekly bulletin, and ran a few paid advertisements in the student newpapers. There were also signs, posters, leaflets, and an audio-cassette which could be mounted in strategic spots to offer users a short canned lecture. There was also a very handy little instructional flip-chart designed to stand on the table beside the viewing machines. Although these things could be planned in advance, some of them had to be produced very late in the game, when details of the text could be filled in. Distributing and mounting them was an essential part of the action as the microcatalogs came into use, and it helped to bring about a smooth transition.

Acceptance of COM by Library Users

We thought we knew something about the difficulty of introducing new patterns of use, and about the degree to which signs, announcements, and leaf-

lets are usually ignored. We were therefore braced for a sharp hand-to-hand engagement of explaining and training when our readers faced COM catalogs for the first time. Our staff girded for the attack, but it never came -- most readers seemed much less aware than we were of the problems, or at least less concerned, and most of them took to the new catalogs quite naturally. Of course, there were a few people who despise machinery and always will, but it was soon apparent that the card catalogs were nearly deserted. When I visited the undergraduate library, I usually saw ten or twelve people standing at the COM catalogs and one or none at the nearby card catalog, which was almost as up-to-date and should have been easier to use because it was limited to the holdings of that particular library.

In the humanities and social science research library, the majority of users switched quite quickly to COM, even though it lacks the campus union catalog. The complaints we received from readers were less often about the catalog itself than about its distribution. For instance, a reader complained that the fiche viewer in his part of the stack, up on the thirteenth floor, was often in use when he wanted it and he was sometimes obliged to walk down a flight to use the mahcine one level down. He seemed to have forgotten that, until a few weeks earlier, there had never been any catalog in the stacks. Perhaps one of the hazards of starting a microcatalog is that it creates demand which can never again be filled by card catalogs.

Use Patterns

One pleasant surprise, which became visible quite early, was that the circulation of our "old class" books jumped to about three times its former level, as a result of the "old" and "new" entries being interfiled in the COM catalog. Apparently a majority of readers had not been bothering to look at the "old class" part of the card catalogs. This may be of interest to anyone who has thought about restarting his card catalog.

Queues at some machines and neglect of others soon showed that we had been wrong in some of our preliminary guesses about the popularity of various sections of the catalogs, and we adjusted the distribution as quickly as we could. That is, we changed the mix of indices, or moved machines, and even added a few machines.

To help us lay plans for the second edition, we felt the need for more information than we could obtain from casual observation. During the first five weeks of the spring term the staff thus conducted a study of the microcatalog environment. Some hundreds of questionnaires completed by the users of catalogs were analyzed, users were interviewed, some staff recorded their own uses of the catalogs, and the use of particular stations was observed and recorded over sample periods. Thus, we learned something about what users were really doing as well as what they thought they were doing. There was not time for a study to be carried out with great scientific elegance, and a more comprehensive study is now being planned, but we did obtain helpful answers to a number of questions which were important to us just then.

We found that simple alphabetic telephone-book filing pleased the readers. Even library staff, accustomed as they were to traditional library filing, indicated little or no difficulty in using the new order.

Users tended to overestimate their use of author and subject as access points and to underestimate their use of the title index. The amount of information given in the indexes was sufficient to satisfy most searches by library staff and by others. The title index, which includes all titles, is used about half again as much as the subject index. There was variation from station to station, but, in more than 8,000 recorded uses the traffic at the three indexes was in the ratio of 35 (author) to 32 (title) to 17 (subject). On this basis, the number of subject indexes at the larger stations have been cut down.

Use of the FBR (full bibliographic record) was surprisingly low and was mostly confined to library staff. Again, the number of copies has been reduced at some stations. Although we made full sets of the fiche catalog available to departmental libraries across the campus at a somewhat subsidized rate in the first year, we have charged them a more realistic price in the second year, based on the full add-on cost of extra sets. However, they have also been allowed to limit their orders to the particular sections they want. This year they pay $275 for the full edition plus $100 for the supplements, but quite a few departments have ordered only certain parts rather than full sets. If we had made copies free to all University departments, then all would expect to receive a full set of everything. The charge has proven a simple way of matching the demand to the budget, and I do not think it has inhibited distribution unduly. For instance, one teaching department, which has no departmental library and is just across the street from the central library, has bought its own viewer and a full set of the fiche catalog.

The greatest surprise, for many of us, was the light use of the supplements. We knew, of course, that use is spread over the whole collection and is not concentrated on the acquisitions of the last few months, but we were still exceedingly concerned about keeping the catalog up to date. Although the supplement was the very first microcatalog to be mounted for use, our survey five months later showed that many of our readers were unaware that it existed, and those who did know about it used it only occasionally or never. It accounts for less than 3% of their use. Hardly anybody used it except the library staff, and, in the survey, it accounted for only 17.8% of their use. For budget reasons we have reduced the supplement to a two-monthly cumulation, and this would still appear to be more than is needed by most of our readers. On the other hand, our staff members who need up-to-date records in their business would prefer to have immediate access through a computer terminal rather than having to wait for any kind of printout on paper or film, and it now appears that the need for this kind of up-to-date access is far more localized than we had thought.

The second year of full-scale operation, with most of our readers quite accustomed to microcatalogs, has confirmed most of our initial impressions. It seems to me now that the wide distribution of COM supplements may not be

the most efficient way to provide short-term updates. It seems to me that the observed need could be met more effectively by having the last year or two of additions and changes on-line, available to library staff mainly through terminals, which would be available in any case for other purposes, and available to the public at only a few strategic points in the library system. Long-term updates for wide distribution will still, as I see it, require periodic new editions in microform. The precise form which this combination should take, the practical economics of it, and precisely how it should be brought about still require a great deal of analysis and planning, but, after two years' experience with COM, we can proceed toward it with greater confidence in the outcome.

Being the first large library on this continent to have a full COM catalog has posed a number of problems. One that seems to be growing is the amount of senior staff time burnt up on invitations to speak at meetings from coast to coast and in receiving visitors who brave the northern wilds to see what we have done. I take this occasion to tell you that we now run a COM seminar for visitors the last Friday morning of each month, and anybody who wishes to visit us is especially welcome on that day.

Summary

Having closed our main card catalog twice, in 1959 and 1975, and relying now for access on a computer-based microcatalog of our whole collection, we face the same problem as other libraries in connection with AACR2. Shall we close a third time and start over again, or what shall we do? No matter what any of us do in 1980, we shall face the same problem again with AACR3.

In pondering the problem, I like to keep the following discoveries in mind:

(a) Ninety percent of readers who use our catalogs do not go beyond the basic data they find in the indexes.

(b) Use of the subject index is lighter than we thought. About three percent of our readers look for recent additions to the catalog.

(c) Contrary to what we used to think, our staff and our readers use the title approach almost as often as the author approach.

(d) Our readers make better use of a COM catalog in which two entry systems are interfiled than they did of two separate card catalogs.

(e) Professors and students do not really understand or love our catalogs in any form, as we do ourselves.

(f) Whatever decision is made should be treated and presented as a management decision based on a careful appraisal of costs, technical feasibility, and effectiveness, and should not be treated as a political decision.

IMPLICATIONS FOR ARL DIRECTORS OF FREEZING THE LIBRARY OF CONGRESS CATALOGS

H. William Axford

When the Library of Congress freezes its card catalogs and implements AACR II approximately two years hence, the era of the automated cataloging data base will finally have arrived. Many might argue that this landmark in the history of librarianship occured some five or six years ago, when OCLC went operational, but the fact remains that, for most libraries subscribing to its services, OCLC serves primarily as a source of machine-produced catalog cards. It is not a means of escaping either the costs of maintaining card catalogs or the physical and intellectual limitations they impose on students and scholars. Given the attitudes underlying this situation, the crucial question for the future is, "How many ARL directors will see in the 'rosy fingered dawn' emanating from Capitol Hill unparalleled opportunities for a resurgence of the kind of leadership that established the ARL Library Director as an educational force on campus during the great period of building that began after World War II, and how many will prefer to doze into the new era, wrapped in the nostalgic embrace of yesterday's sunset?"

An overly dramatic assessment? I think not. Reflect for a moment on the implications of the Arthur McAnally-Robert Downs paper, which documented a dramatic downward slide in the status of the ARL Library Director beginning around 1970. In attempting to explain this phenomenon, the authors highlighted an imposing array of external forces, which suddenly changed the relatively simple province of the gentleman, scholar, and bookman into an increasingly complex managerial enterprise. In discussing the impact this transition had on the library director, they stressed, with something approaching fatalism, the overpowering nature of the external demands on the office. At the same time, they tended to ignore the fact that, as the fortunes of higher education turned downward, it produced among the directors of the nation's research libraries what might be called a "corporate paralysis in leadership". This, in turn, produced concern at the highest levels of university administration over the possibility that research library directors were bound to yesterday's solutions for today's and tomorrow's problems. I think this feeling on the part of institutional executives -- who were struggling with the same general problem all across the campus -- played a major role in creating the unprecendented rate of attrition among ARL directors beginning around 1970, which was one of Downs and McAnally's principal findings.

At the risk of dusting off old chestnuts, I would like to take a few moments to go into the historical background of this problem, as I think it is basic to understanding the leadership imperatives for ARL Directors inherent in L.C.'s decisions to freeze its catalogs, develop a fully-automated cataloging data base, and implement AACR II. As the decade of the 1970's opened, so did a new chapter in the history of higher education in America. Administrators and faculty, long accustomed to the problems associated with sustained and apparently perpetual growth, were suddenly faced with a new set of pro-

blems -- those associated with budget stabilization or actual decline. The downward turn was abrupt and traumatic, and it shattered not only individual and institutional aspirations, but also the traditional alliances and commonly held assumptions which together produced what has become known as the "community of scholars". As the problem worsened, competition for program survival replaced competition for larger shares of expanding university budgets.

In this dramatically new situation, the library director found himself in an increasingly uncomfortable position. Traditionally a bookman and scholar, he was intellectually and emotionally tied to influential groups within the faculty who shared his interests and who, by nature, would oppose anything that appeared to tamper with the traditional research library. On the other hand, as an administrator responsible for a large budget, he came under increasing administrative pressure to make radical breaks with the past so that the library might continue providing adequate support for teaching and scholarship within the contraints of sustained budgetary restrictions. The adjustments required to provide the leadership sought by institutional executives were extremely difficult, and data indicates that a distressingly high number of ARL directors has either failed to make them or is perceived as having failed to make them.

At the root of the problem has been the ARL director's self-image. Generally speaking, the director has seen himself as a professional, whose primary managerial responsibility was acquiring and housing a research collection of national or international importance. Generally speaking, the academic community also saw this as his distinct and proper role. Responding to a new array of managerial problems stemming from the convergence of computer technology, new concepts of library governance, and the end of large, yearly infusions of new money, required not only a reassessment of basic assumptions surrounding the director's position, but also the development of new managerial and technical skills which seemed to have only an indirect relationship to the world of scholarship, if indeed they had any at all. In addition, issues which now had to be brought before the academic community, unlike those of the recent past, became controversial and of a nature guaranteed to alienate the very scholars who had been the ARL library director's traditional sources of support.

For well over two decades, influential faculty members and ARL directors had operated in more or less close cooperation on matters of library development. This loose, but effective, alliance was forged out of a common interest in obtaining a larger share of growing university budgets to build research collections congruent with expanding graduate programs and expanding faculty aspirations. Although tensions were always present within the alliance -- mostly because of matters related to control over resources and operations -- the problems associated with growth were easily perceived as happy ones. Out of them could evolve something better for all concerned. As a matter of fact, the only painful substantive discussion between ARL directors and their faculty colleagues during the days of opulence probably surrounded the decision to adopt the Library of Congress classification system. With his perception of the library closely paralleling those of the faculty, and with every

prospect of adequate funding for rapid progress toward a collection of international distinction, the ARL director thus emerged in the 50's and 60's as a selfconfident leader on campus, directing his part of the show uninhibited by significant internal or external conflicts.

Two things abruptly shattered this happy state of affairs. First of all, the campus power struggles associated with Vietnam generation students and their faculty allies resulted in a significant transfer of power to agencies outside of the university. This was true even in private institutions, where governing boards and powerful alumni interested themselves in matters which had previously been left to the administration. This development, along with the emerging financial crisis, soon produced a shift in power from the faculty to the university administration. Where, during the previous period of sustained growth, the initiative for planning had largely rested with the faculty, it shifted to the administration during a period characterized by stabilization or decline and an erosion of public confidence. Put another way, the burden of leadership for proposing the program adjustments necessitated both by budget problems and by demands for accountability from outside agencies fell, by default, on institutional executives for the simple reason that faculty were not about to reduce or abolish the empires they had built.

As they struggled with these problems, university administrators looked for imaginative and forceful leadership from the budget heads responsible to them. This was particularly true of the library, whose labor-intensive operations and relatively large total budget seemed to offer possibilities for a more effective utilization of existing resources. The rate of attrition among ARL directors in recent years strongly suggests that this kind of leadership did not emerge on a scale commensurate with either the possibilities or the need. But, the reasons why it did not emerge go beyond the inability or unwillingness of individuals to adjust to a radically new set of circumstances.

The further we moved into the 1970's, the more evident it became that the library world was in a state of flux. Although there seemed to be some perception of future possibilities, the means of achieving these possibilities were by no means clear. If the leadership by ARL directors was hesitant, it was partly because the library community as a whole had not yet tested the potential of new technology or developed the philosophical and practical bases for effective networking and resource sharing on a national scale. Now, however, the initial breakthroughs in utilizing computer technology in libraries have been achieved. With L.C.'s decision to freeze its card catalogs and adopt AACR II, ambiguities about which direction ARL libraries should move should no longer exist. The only remaining question is whether the proper leadership will emerge in sufficient strength to reestablish the status once held by the ARL library director and, by implication, ARL itself.

For a number of reasons (and the technical problems are not the most important) rising to the challenge inherent in L.C.'s plans will not be a simple matter. On most campuses, it will cause at least a temporary rupture of the library-faculty alliance which has operated so effectively in the recent past. Unlike campaigns for larger book budgets, improved staffing, and new

buildings, many faculty will not perceive a proposal to freeze the card catalogs as something beneficial to their teaching and research. On the contrary, the opposite view is likely to prevail. Humanists -- those staunch allies of the days of growth -- are particularly likely to engage in emotional polemics at faculty meetings and to send memorials to presidents and provosts which begin, "The faculty views with alarm...." Some will charge that a proposal of this kind could only come from illiterate technocrats and insensitive budget cutters who would dehumanize the library and victimize its users for the sake of a few thousand dollars.

These views will not be without vocal sympathizers on the library staff. Universities have often been described as the peaceful groves of academe, particularly by those with an incurable sense of romanticism, but, when someone suggests pruning some of the old trees in order for new shoots to grow, it can be, as Professor Charles S. Steinberg so eloquently put it in a recent piece in the New York Times, "... A jungle more terrifying than the real jungle, where predators kill out of natural need for food...," instead of being motivated by "...an instinct for the jugular that is driven by a deadly combination of ruthless ambition and sheer malevolent sadistic pleasure."[1]

In case you think that Professor Steinberg's view could be prejudiced by the fact that, prior to his joining the faculty of Hunter College in 1972, he had been Vice-president of CBS-TV for 16 years, it might be worth recalling the experience of the famous scholar and diplomat Wilhelm Von Humboldt. Early in the 19th century, the Prussian government commissioned Von Humboldt to found the University of Berlin, which subsequently became the prototype of the modern research-oriented University. However, he resigned his position at the University only a few weeks after classes had opened, complaining that scholars constitute, "The most unruly and least easily satisfied class of human beings--with their eternally conflicting interests, their jealousy, their envy, their lust for power, their one-sided views, in which each one believes that his discipline alone deserves support and advancement." In fact, he confided to his wife, being the rector of a university is "worse than trying to manage a troupe of comedians."[2]

Because of these adverse initial reactions, successfully leading the campus community toward effective utilization of a fully automated cataloging data base, transcending the holdings of an individual campus, will require a commitment as intense as the one which led us to build the monumental research collections that are the great legacy of the three decades following World War II. This commitment will have to be evident to all concerned, both inside the library and out, through close personal involvement at all stages of the planning and actual transition to whatever the successor to our catalogs may be.

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[1]Charles S. Stienberg, "The Life Of the Mind," New York Times, Vol. CXXVIII, p. 35, December 12, 1977.

[2]Quoted by Theodore Ziolkowski in "Yesterday's Model for Today's University," The Chronicle of Higher Education, April 24, 1978, p. 44

This means that the library director must personally shoulder the responsibility for bringing the issue in all of its ramifications before the campus community. He or she must make every effort to keep the discussions focused on real issues rather than emotions. He or she must hold forth a vision to the academic community in which properly used technology will eventually enhance the library's capabilities for supporting teaching and research and, consequently, the traditional humanistic role of the university. This calls for a missionary effort to convince the community that modern technology can work on the side of the angels as well as the side of the devil -- if only the angels will see the possibilities and perservere through a period of development. I chose the metaphor purposely, as a reflection of the situation on the University of Oregon campus, which, for the past few weeks, has resembled an allegorical play portraying the conflict of good and evil. This has not resulted mainly from our plans to introduce COM subject catalogs on July 1, but from the suggestion that the university may have to live with an off-campus storage facility in four or five years, unless a dramatic change occurs in the politics affecting higher education. In the course of the discussions generated by this suggestion, irate humanists have expressed strong opinions regarding the innate malevolency of modern technology toward the needs of scholars and teachers.

The personal leadership of the library director in the transition to a fully automated cataloging data base is probably even more important within the library itself than within the larger campus community. It is a responsibility that cannot be delegated, nor can it manifest itself only through memoranda, position papers, or policy statements. A project of this importance requires circumventing the library's inevitable layers of bureaucracy and establishing direct, personal communication with those who will be asked to implement the new system and live with its products.

Obviously, I do not mean to infer that the dean or director should become enmeshed in the mechanics of bringing up whatever system is decided upon. In most cases, he or she simply does not have the depth of technical knowledge to participate at this level, even if it were desirable -- which it is not. But, the director must personally undertake to communicate at least the following to those charged with creating a technically efficient alternative to the traditional card catalog:

(1) The reasons for the impending change, framed in the broadest possible perspectives.

(2) Assurance that the new system will, in the long run, enhance the library's support for teaching and research.

(3) Assurance that sufficient funds will be available to bring the new system into full operation.

(4) Assurances that, although there will inevitably be some dislocations, some new assignments of responsibility, and, in some cases, internal transfers of personnel, these can be handled with a minimum of aggravation for the individuals involved.

(5) Assurances that, if the library must help ameliorate university budget problems by returning some of the savings accrued through fully automating the cataloging process, this can be handled through the normal process of attrition rather than by discharging employees.

(6) Finally, assurances that the director accepts full responsibility for the program through all stages of the transition, including the inevitable problems, delays, and aggravations that will occur before the new system is running smoothly.

The demands on the library director's time during the transition should not be underestimated. Radical change simply cannot be accomplished without anxiety and resentment, both within the library and elsewhere in the campus community. Nor can a venting of emotions be avoided before a rational discussion of real issues and alternatives begins.

In spite of this, the picture is by no means gloomy, and there are rewards as well as headaches. First of all, it should be recognized that, on most campuses, advocating a program which both makes economic sense and promises major short and long-range benefits for teaching and research (such as multi-point bibliographic access to collections, special catalogs tailored to individual program needs, and rapid bibliographic access to resources in other libraries) will win solid support from the university administration. Furthermore, the prospect is good that, from the support generated by such a proposal, the library and the university administration will eventually develop a working alliance as effective in enhancing library support for teaching and research as the old alliance between the library and the faculty had been. I would like to illustrate this point with a brief account of the events that led to the first phase of freezing the card catalogs at the University of Oregon on July 1, 1977.

Serious planning for automation began in April, 1975. By the end of the summer, we were building the cataloging data base, with all current cataloging going into the computer (including works in non-Roman alphabets, which were entered in transliterated, short-title form). A little over a year later, at the start of Fall term 1976 the first microfiche catalogs appeared in the Education/Psychology, Social Sciences, and Humanities Divisions of the Main Library, and in the three Branch Libraries, Science, Law and Art, and Architecture and Allied Arts. These catalogs, representing the library's entire holdings, consisted of three parts: a basic catalog, created by photographic techniques, and yearly and bi-monthly cumulative COM supplements. Several months ago, we dropped the bi-weekly supplement and went to a monthly cycle. At the same time, a delivery service, based on the new catalogs and using dedicated phone lines, was set up between the branches and the main library. Recently, the College of Music became part of this intracampus network, when a microfiche catalog and a dedicated telephone were installed in its administrative office. I should mention that the three divisional libraries, which have existed since 1953, never had had divisional catalogs. Consequently, the new microfiche catalogs opened up distinct new service possibilities.

The installation of the microfiche catalogs signaled the beginning of discussions within the library on the "why", "how", and "when" of freezing the card catalogs. The "why" was easy, as it simply did not make sense to run two parallel systems, particularly in light of the university's precarious budgetary situation. The "how" and "when", however, were difficult, as both were extremely sensitive political issues. Interestingly, the Law Library chose to be the guinea pig. The Law Collection had never been classified, but, when a new Law Librarian arrived in July, 1976, he ended a long period of procrastination by deciding to adopt L.C.'s "K" schedule. Classification of the collection began almost immediately, with all records being converted into machine-readable form. We set a goal of producing the new Law Library Catalog by the opening of Fall term 1977, and this catalog was to be on COM only. There would be no "turnkey" card catalog produced.

A report on the library's discussions about the future of the card catalog was presented at a meeting of the University Library Committee in October of 1976, stressing the library's technical ability to freeze the subject card catalogs and start new ones on COM, the strong economic arguments for moving in this direction, and the ultimate advantages to students and faculty of a fully-automated data base. To say the least, this and several subsequent meetings were lively, with most of the debate focusing on whether the faculty could or would use catalogs on microfiche. At the time, the Committee had in hand several irate protests from colleagues concerning the recent replacement of reserve book room computer printouts with lists on COM. The majority of these letters had been solicited by a frustrated professor after his first experience with the new system and his refusal to have anything to do with it thereafter. Their effect was to add a distinct emotional flavor to the Committee's discussions on the future of the card catalog.

While the future of the card catalog was being discussed with the University Library Committee, the deadline for decisions on how to meet the University's anticipated $1,000,000 budget deficit rapidly approached. At a meeting of the Council of Deans in January 1977, the Provost asked each Dean to submit the amount he or she could contribute toward offsetting the deficit and to specify from what part of the budget the money was to come. I reported that the Library could return to the university roughly 50%[3] of the yearly savings accrued from automating the cataloging process and would willingly do so if the administration would, in turn, agree to support the freezing of all subject catalogs in the Main and Branch Libraries on July 1, 1977. The offer was accepted.

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[3]Net savings of automating the cataloging process and closing the subject catalogs amounted to approximately $84,000 annually. Of this, $42,500 was returned to the University out of the library's salary budget including fringe benefits. The large savings achieved -- approximately $30,000 annually -- by closing the subject catalogs was in large part due to the automatic subject control program offered by Blackwell North America.

At its February meeting, the University Library Committee was informed of the need to cut the library's budget, at which time I took the position that freezing the subject catalogs provided a way to achieve the cut without dipping into the book budget, reducing staff, or limiting hours of service. After three long and heated meetings, the Committee reluctantly agreed that this course was, on balance, preferable to the other alternatives available. The original target date for freezing the subject catalogs had to be extended to the opening of Fall term 1977, but, by that time, filing in the subject catalogs had ceased. In addition, the first edition of the Law Library's new COM Catalog had been produced, and the card catalog removed from the Art, Architecture, and Allied Arts Library. Thus, the question of "how" and "when" we would begin to freeze our card catalogs became a matter of exploiting the opportunities offered by a major university budget crisis. The result was a quid pro quo between the Library and the University administration, which, in terms of all of the trade-offs, was in the best long and short term interests of the entire academic community. This experience suggests that freezing the card catalog will be easier on campuses beset by serious budget problems than on campuses where this condition does not exist.

It is important to note that, even though the University Library Committee ultimately placed its imprimatur on the decision to freeze the subject catalogs, a feeling remains scattered both within the Committee itself and throughout the faculty that faculty consultation was ex post facto, that the catalogs would have been frozen in spite of any objections they might have had to offer. Underlying the inevitable pockets of resentment which have resulted, particularly among the humanities faculty, is the strong tradition of faculty governance at the University of Oregon which originates in the University's original charter. This tradition appears to be endangered when the university administration, or any unit within it, responds to reality by taking the lead in defining the problems posed by chronic budget stringency, analyzing the alternatives for addressing them, and forcefully advocating a specific course of action. This immediately puts the faculty in a defensive position, as it has to react to the administration's initiative rather than the other way around (which had generally been the case during the late and lamented period of sustained growth). If the administration has done its homework, as is usually the case, because the administration has the support staff to do it, the faculty is left with the feeling that it has been presented with a Hobson's choice. That is, none of the proposed alternatives is really acceptable. Instead of governing, the faculty perceives itself as being governed by forces and individuals beyond its control. It is this situation -- even more than the faculty's inherent conservativism -- that makes responding to L.C.'s initiative a risky, and in most cases, a tension ridden process.

In the final analysis, however, the implications for the ARL library director of L.C.'s decision to freeze its card catalogs transcend the bear garden politics of the individual campus. They are to be found in the leadership role he or she must play in creating a national and perhaps international network of research libraries, which will provide scholars access to resources in excess of their most feverish intellectual aspirations. The long journey begins with relegating the venerable card catalog to its place of honor in the

annals of library history. What awaits us at the end is, figuratively and literally, Alexandria reborn -- a global library, whose constituent elements will be linked by increasingly sophisticated and powerful computer technology, whose collections will be truly ecumenical, and whose service area will be the ecumenae itself, the world as we know it.

MR. DOUGHERTY: As I said earlier, I received a number of interesting responses to the questionnaire I had distributed before this meeting on the preparations of ARL libraries for freezing card catalogs. I have invited three of the respondents -- without any forewarning -- to give us a brief rundown of their answers. Of course, I realize what effect this may have on the response to future ARL questionnaires.

JOANNE HARRAR (Maryland): One of the things I learned about responding to a questionnaire, if this is any indication, is that next time I will keep a copy. Just what did I say that got me into this?

Very quickly, the situation at Maryland is probably not too different from your environments. For approximately fifteen years, however, we have had an in-house data center, which, as a cost center in itself, the State has seen as something to do away with. Within the next fourteen to twenty-four months, we know we must give that facility up and start using the administrative computing center on the College Park campus. Interestingly enough, we have two computer centers, and there has been a fight afoot lately to determine who gets us. We are pretty sure we will be going with the administrative data center. If that decision is not made locally, the State will again make it for us, so it behooves us to try not only to identify the questions but to identify the answers and solutions in a very organized fashion. By the time the 'take-over' comes, we might then be ready, and the computer center might be ready to accept us.

The great difficulty we foresee in this change in affiliation and loss of autonomy is the fact that no one knows what priority we will have in the work to be performed. Our computer center, like many of yours, I imagine, works with crises, and there are certain priorities that everyone recognizes must be met: payrolls, student record updating, registration, and so on, all of which mean that library activities occupy a fairly low priority in the minds of many people on campus. Our concern at the present time is the extent to which we can impress upon the administration the fact that our needs are continuous and that they require care. They are going to have to come up higher in the university's list of concerns than they did when we were totally separated and not an element for anybody's concern, except to the extent that there we were: a half-million-dollar-a-year facility that was not producing to the extent that that number of dollars suggested.

MR. STUDER (Ohio State): Let me say, at the outset, that most of you know I have been at Ohio State little more than a year. I think Hugh Atkinson probably is still more fundamental to what is going on there than I, although he has not been kept abreast of what has changed in the last year and a half.

We are in the very slow process of working toward closing the catalog, and a benchmark of that process will be reached this month. With the next update tape, our bibliographic records will be going into our file. These are

from the OCLC archival tapes, and every weekly maintenance run from that point on will begin to add full bibliographic records, as opposed to the abbreviated ones we have put in up to now. They will stand as an intermixture among the abbreviated records in the file, and, in fact, the full records will actually serve both purposes. That is, users will still usually pull up the abbreviated record. If they want to call specifically for the full bibliographic record, they need only employ a simple button-pushing mechanism.

This means that, as of that time, in a very loose sense, the full records in the file will be searchable by the full range of bibliographic entries. All secondary and primary entries will be accessible. This is often referred to in-house as subject search, but it is more than that, because secondary authors, series, and added entries of all kinds will be accessible at that time.

Backing up a little, there seems to be absolutely no problem with the priority of library automation at Ohio State. Because it has been around for so long, it has acquired a very positive halo, and no one challenges it. I think that is the virtue of having gotten in on the ground floor. The library system is by far the largest consumer of computing power on campus. That aspect is not challenged either in the present or the future as far as I can tell. It is seen as a good thing.

We intend to take the file back, in a full sense, only to 1974. That is an internal decision based on what the cataloging department felt was the intergrity of the record quality going into the database. Records are actually available from OCLC back to 1970 -- that is, if they ever get around to us with the archival tapes. I am sure many of you have ordered them, and they are very late. By the end of calendar '78, if in fact we have the tapes from OCLC, that will give us about 250,000 full bibliographic records representing the last five years of input.

Several task forces, all formed since I have been there, are wrestling with a lot of nitty-gritty issues. Little by little, we are trying to come to ad hoc decisions, many of which have to be implemented later, in order not to arrest the progress in motion already.

The file presently accommodates upper case, but I am not sure that is the only possible representation of records for the future. Thus, we are saving the archival tapes, which provide the original input, so that all of the diacriticals and other forms of punctuation and foreign characters which cannot be represented in the current file can later be reconstituted into an upper-lower case file, when we can afford the hardware that will accommodate that.

We are going to handle non-Roman alphabets by entering the full record in transliterated form while we continue producing full sets of printed cards for filing in the various language areas. There seems to be no possibility of getting consensus from the faculties involved that they can do with a transliterated record. I hope, over time, we can negotiate that issue out of existence, but, for the transition period, we will do both, so no one can possibly complain.

The number of terminals that will be adequate to substitute for the card catalog is an issue we have not resolved. Four times during the last year we have done a study at a given site to see what the intensity of use was, much as Joe Rosenthal suggested. We get very conflicting results, which I think indicates the need for a larger number of samples. What bothers me is that I do not think we have any necessary reason to believe that user behavior in front of the CRT is going to remain the same as it is in front of a card catalog, so I think we will be dealing at best with educated estimates that will have to be readjusted considerably on the basis of real experience.

What we lack -- and, in my opinion, we will therefore not call this an on-line catalog for some time -- is authority control, the intricate cross-referencing struture which Joe referred to. We are discussing it, trying to think of expeditious ways to bring it about. Obviously, it will not be available for a year or two, but in the meantime, we have the same form of non-cross-referencing access that is available in the abbreviated catalog right now. We are hoping to get some help there from the LC subject heading tape, which they have recalled. I do not quite know why. I would like to try it. The prospect of half of those items changing between now and 1980 would not seem to make it very profitable to put that file into our file anyway.

Cost savings at the outset, according to two different studies, amount to only about $50,000. That will not be nearly sufficient to cover the added cost of an on-line file, because our storage capacity is being upgraded to one billion, six hundred million bytes within the next couple of months to accommodate the expected mass of characters which may flood the file. We do need transitional funding, and the administration is going to have to decide to give that to us, because it is not in the budget, and I am simply taking it on faith that they have such a good opinion of the automated system that they will provide it.

Whatever number of terminals we decide are necessary for an on-line catalog must be acquired with ad hoc funding. My guess is that we will need a hundred or more. The terminals we use are only in the $1,500 range. That is not a great deal, but it is not the cost that is problematical, it is the upkeep. It costs $150 a month to maintain each of those terminals, and I think that is a conservative estimate with twenty-five odd circulating locations in twenty-five odd places where one needs terminals. Really, it could be more than that.

We are having some problem with machine filing. It is not that filing by machine is any worse or better, but it is surely different, and people are going to have to become accustomed to it. I am sure the surprises will not be totally predictable by the few examples we have cared to extrapolate so far. We have only begun to talk of AACR-2. Obviously, if we have a quarter of a million records or more up at the time the new entries start to come through, we are going to have a big problem, because they will be incompatible. I am assuming we will not have any option if LC is producing the new records in the new form and they are being read into OCLC. We cannot countenance changing every one of those records back to the current form of cataloging, so some way

or another, we will have to use them. We have made the rather glib decision, without testing the implications, that we might be able to change the records in machine-readable form in a wholesale fashion, so we will probably leave the current catalog totally alone with regard to that discrepancy.

User training is the topic of interest to another task force. It is not getting the heavy attention it needs, because the need for it is still futuristic enough that other crises are taking priority, but it involves looking at a whole new environment. Obviously, we will have to provide instruction for a great many people, and we do intend to make user manuals available. But, I think we will have to have more assistance available from the library staff than is now the case for traditional reference and information assistance, because of a staffing insufficiency. We cannot expect the user to learn how to deal with this relatively complex environment, to learn stop words, and so forth and so on. We did a study to see how much it would cost us to do retroconversion, because, in our Title II-C proposal, we had a cost item for 100,000 records to be converted. It came out rather neatly at a dollar per title. I do not know if that was a preconceived round figure that people achieved by working backwards, but it is not as excessive as I thought it would be. I think, except for windfall grants that provide that opportunity, we would not get into the business of retrospective conversion beyond the archive-tape potential of OCLC. This is true because of two economic factors, one being the actual conversion cost versus the utility of the older records in the file, and the other being the storage cost. The file will grow large enough just implementing forward without trying to implement backward.

One thing that bothers me is that, even when this is up and running in the most perfect way, it will still be nothing but a machine replication of card catalog searching. That is, it does not really add any search power. There is no Booleian logic possible, and the computing center tells me I had better never ask for that because of what such a large file would do to their machine time. I simply have the nagging feeling that the machine environment ought to offer us a little more than the card catalog. Certainly we cannot have the confidence to substitute until the machine mode offers at least as much as the old method, but somehow I think it ought to offer us even more.

I have no problem seeing the new environment as cost effective. I do not think that the money saved in the meantime or in the transition is enough to fund the new world, but I think "cost avoidance", to which several speakers have alluded, is a real issue. Nevertheless, it is a hard one to sell to the administration. When you speak of cutting money by saying, "I'm not going to ask for so much next year," that does not really weigh very heavily. But I think there is a real prospect of reducing the rise in library costs in the future. I do not have to qualify that.

MR. SCHMIDT (SUNY Albany): I am struck by one of the concluding remarks Bill Studer made. The new age does, in some respects, not add significantly more in the way of access to what we have already had. My former systems officer, now an executive director, was fond of saying that we were talking about hitching a rocket to a wagon.

The situation at SUNY Albany is in some ways similar to what Bill has described at Columbus. We have some advantages which he does not enjoy, particularly one of age. If you recall Don Koepp's paper at our last session about the Collection Analysis Project at Arizona State, he made some references about how much easier it is to do things at institutions that are younger -- not quite those words, Don, but something close to that. The context of the State University at Albany is that we have had a full retrospective shelflist in machine-readable form since the collection was recataloged under the guise of reclassification from Dewey to LC. All of you who have been party to reclassification know that "reclassification" is a misnomer. You really recatalog. That was done in the mid-60's when the collection was small. As a by-product of that, a master shelflist record of a maximum 244 characters in fixed-field format was generated on magnetic tape. That inputting of records has continued and goes on today, so that, in 1972, when I arrived on the campus, there was a full retrospective shelflist available on magnetic tape. As another by-product of the recataloging endeavor, the Union Catalog for the campus was divided into an author-title file and a subject file.

Since 1972, we have been at pains to engage in what I have called "distributive bibliographic access", contrived in a variety of ways, two to date. The first involved putting the full retrospective shelflist on-line and paying for one or more dial-up lines, as traffic seemed to warrant, to allow people to use teletype terminals with acoustical couplers to search the shelflist from wherever they happened to be on our campus. Those of you who have been to our campus might think of that as a luxury and as, indeed, spoon-feeding (as some of the library staff does), because you can get to the library from any point on campus without much more distance than a good tee-shot would carry, and you can walk in tunnels that connect all those buildings without ever going out into the Albany winters. Nonetheless, we have provided the capability of decentralized bibliographic access through the dial-up terminal lines. We do not provide the terminals yet, but there are some fifty or more terminals that do have the capability of searching our file, and, for some reason that I profess to think mysterious, that number has doubled in the last three years since we have advertised the decentralized search capability. I think there is a cause and effect relationship there that does not have anything to do with our paying for the terminals.

The second means of decentralized bibliographic access takes advantage of an existing network, the telephone network, and allows people to call in and ask an operator with a CRT to search and see if an item is owned. If it is owned, and in, it can be checked out. That check-out can take the form of a document delivery, again through the tunnel system I described, or it can take the form of keeping the item on a "hold" shelf until the user comes over and picks it up. Most users prefer to come and pick it up rather than wait for it to be delivered, even though we have same-day delivery, which I find interesting. We had feared that the delivery system would be inundated, but it is not.

The problems we face with LC's decision to close its catalog and adopt AACR 2 are essentially the same that have been described by others. We have undergone significant staff reductions in technical services as a result of

our on-line shelflist and the utilization of OCLC. I find the arguments that I will have to present to the administration concerning additional personnel to cope with AACR-2, freezing the catalog, and the LC shelflist too arcane for most administrators to deal with, so I am thinking of ways to take advantage of our on-line shelflist, but, frankly, the stumbling block is the authority file problem. I have no nifty solution for that, but, if there were a nifty solution, it would allow us to reset the file with the form of entry changed, and thus we could maintain the on-line shelflist.

I can think of two concluding remarks at the moment. First, I think we overestimate the degree to which users care about whether there is a card format catalog. Our experience and the experience of other institutions seem to indicate (with exceptions) that users do not much care what form the tools of bibliographic access take, as long as they perceive it to meet their needs. Indeed, I am amused on Wednesday afternoons when the reference staff allows me to work at the reference desk for a couple of hours, that students will wait in line to use our one public access CRT for our on-line shelflist -- we have four more being installed -- rather than go to the card catalog drawers. Particularly the younger students would rather use the terminal than the card drawers.

The second thing we should keep in mind is the extent to which users will need help in using the hardware we supply them, whether it is a terminal, a microfiche, or microfilm reader. There is abundant evidence that users need far less help in using hardware than many of us suspect. Those of us who have children growing up with calculators and stereos and other kinds of things are well aware that they are more able to cope with, use, and fix those things than most of us will ever be.

MR DOUGHERTY: I knew I could have confidence in ARL directors being able to think on their feet. I asked Joanne Harrer to talk about computers because, recently, all nine campuses of the University of California conducted a study of computing needs for the University. I was aware of the study at our campus but was not much involved with it, and I was quite surprised when the huge document came out. Libraries got rather short shrift. They simply were not considered a significant part. The researchers gave a report to a blue ribbon panel of outside computer experts, and the experts advised the University that it might rethink the computing for libraries, because it is possible that libraries could absorb almost twenty-five percent of the entire computing capacity of the University. I think this is something of great importance.

I am sorry we did not leave a great deal of time for questions, but I am throwing it open.

MR. DE GENNARO (Pennsylvania): I am all in favor of closing the catalogs, but, when I listen to Joe and some of the other experts in this area, I get the idea that our time schedule is rather tight. January 2, 1980, is not so far away. I guess it is about eighteen months, and many of us are not ready for it. AACR 2 is not yet published and available, and I wonder if even the Library of Congress is going to be ready to implement the whole thing in

1980. I might ask Bill Welsh to comment on that, if he is still here. I guess my question is, "Is January 1st, 1980, some kind of magic date, or could it possibly be put back six months or a year to give the library community a chance to gear up for this and do what needs to be done?"

MR. WELSH (Library of Congress): Yes, we are ready. So are you. I would like to, for the record, make two observations. One, I had nothing to do with the destruction of the Alexandria Library. I was seen in New York, but the fire started quite accidentally, I believe. To put this in historical perspective, you will never be ready. We deliberately set the date of January, 1980, probably in 1964, although I did not identify that date until 1967 or possibly later. But the course for this action was actually established when CLR funded the so-called Buckland study, which was a study to demonstrate that, in fact, the catalog card could be reduced to machine-readable form. Now, there is probably not a single ARL director here who was involved in that decision, so you all are relieved of any responsibility for it, but, when that decision was made -- and it was some years later before anyone really articulated its impact -- that is when we began on this line of the necessity of closing the card catalog. What was the fun of having a machine-readable record unless we were going to utilize it in some way? There is nothing magic about the date of 1980 except for AACR 2. We are going to try to help you to the extent that we possibly can. Joe Howard may have an observation on that.

Two other points I would like to make. I am one who is not in favor of retrospective conversion, and I agree with Jim's point that reclassification is not really reclassification, it is recataloging. That is the problem with retrospective conversion. If you are going to do a full record, to be useful, it requires recataloging, and I do not think we have the resources to do that. Number two (and I think perhaps Bill Studer may have commented about this) it is a very serious mistake to predicate terminal use upon present practice. We have seen that, by the end of the year, we will have over a thousand public access terminals in use, but there is a completely different use for the Scorpio system than there is for the present card catalog. So, I think it is a mistake to predicate future terminal use on present practice.

Joe, would you like to make a statement on how we are going to help implement AACR 2?

MR. HOWARD (Library of Congress): I think it is wise to talk about authority files. We are now putting all of our current name authorities, that is, new headings, into machine-readable form. That was announced about three weeks ago in an LCIB. We also hope we will be getting funding to start on old headings for which we have records in machine-readable form. That will be started in October, or sooner if we can manage it. We have about 900,000 names in the MARC bibliographic data base, and we are in the process of trying to identify the most-used names in that database so we can get them into a machine-readable authority file as a full record. The ones that are less used we may have to dump in and just say, "This is the name, but you will have no access to the references yet."

The thing that comes with AACR 2 is that, in June of this year, we plan to start putting the AACR 2 form of names into our name authorities as a reference. That will enable us to do many things, for example, publish lists before 1980 telling you what our headings and changes will be. By the way, this is also true of subjects. We plan to publish that list as well as cleanse the bibliographic files we already have by using a program. We do not plan to have that completed by January 2, 1980, but we plan to start as soon as possible on the cleansing and updating of those bibliographic files to incorporate the AACR 2 form of heading as well as any new subject headings.

One other thing, if I may take another moment. There is a committee at ALA which is active in providing an audio-visual package on the implementation of AACR 2. In addition, LC, stemming from its need to communicate with its catalogers, will also prepare an audio-visual package, and we will make that available in a workshop in June, July, or August next year. I have just talked to the President of RTSD and offered our services to them if they would like to take this package and show it more widely. If there are questions, I will answer them now, or I will be available all afternoon.

MR. DOUGHERTY: Other questions?

MR. COUPER (New York Public Library): We closed our card catalog in January of 1972, and the stimulating comments all of you have made this morning prompt me to just one or two quick reflections. One is that, when you put the gun to your own head, as we did, you can still take six years to plan this, as we did. When somebody else is putting the gun to your head, it must be done more rapidly. We literally took six years to plan this.

Secondly, I am struck with the constant mention of "authorities". I do not think a single speaker has neglected to mention it. This is one thing I think we have resolved and resolved well. It is workable, and we believe this should be mentioned and emphasized along with all of the other mention of this.

A third thing that occurs to me is the issue of cost. Do you, in conversion and closing, truly become cost effective? I think it is the most damnable thing in the world to try to measure. We think we are cost effective, but I am not sure, if we had to squabble with a hard-nosed provost, that we could demonstrate it to his satisfaction. We are hyperconscious of it as an issue.

I am struck fourthly with the emphasis on the issue of public relations and how you deal with it. We try to pay a good deal of attention to it, and I am struck with Jim's comment, and those of others, concerning how receptive users are if you do just a halfway respectable job. I think the acceptance of this product has been exceedingly good, and one of the main reasons is that it does not look as though a computer did it. It does not look like a computer printout.

Finally, one comment on the retrospective catalog. We currently have in motion a project to restore and make usable our retrospective catalog, which

has somewhere on the order of eleven million entries, some dating back a good way. I am mindful of the fact that one can date the deterioration of paper from the founding of the Republican Party in 1854 at Rippon. We do have some entries that stem from about that time. Our program is to restore something like two million cards that are indecipherable for one reason or another, and then to have the end product, some four years hence, both in book form and fiche form. We did do some rather careful studies about what it might cost to put this into machine-readable form instead, and the low estimate came to five times the cost. Thank you.

MR. DOUGHERTY: I would like to observe that Dick Couper has pulled part of yesterday's meeting and today's meeting together very well by questioning whether you can prove cost effectiveness to a hard-nosed provost. This is what Palmour was talking about on performance measurement. We will be able to prove the cost effectiveness to our provost only by taking yearly studies of what the manual system costs in exquisite detail -- which is not too hard to do -- and comparing those with the automated costs, not in terms of dollars per unit produced but minutes per unit produced and by virtue of changes in the level of employees. If you are not doing those kinds of measurements, at least begin now, so that you have something with which you can compare your "after" with your "before". Otherwise, you will be in a position of not being able to justify it.

Are there any more questions? Comments? Let me just conclude, then, by saying that it is clear that many of the long-standing beliefs we have about bibliographic control and catalogs are going to be sorely tested in the next two or three years. If Toronto finds that ninety percent of the use is through the indexes, rather than the full bibliographic records, this will be a telling point. I suspect that, if we were to take that back and tell most of our staff this is the case, they would reject it almost out of hand. One of the challenges will be to let the staff confront this in such a way that they gradually come to accept it. I do not think this will be an easy challenge, but I think it is one that we can accomplish. Maybe I am not quite as sanguine as Bill Welsh is. We have the ability to do certain things, but, for most of us on campuses, I think the article in the Chronicle of Higher Education characterized it best. There is sort of a ticking in our current catalog.

I would like to thank all of the participnts.

BUSINESS MEETING

Report of the Executive Director

MR. LORENZ: Since we are in Nashville, I have been asked to greet you in the immortal manner of Minnie Pearl and say, "Howdy!" But to get back to business, we have been having a busy, eventful, and productive time at the headquarters. The last six months have been particularly active. We have been concentrating on Title II-C, on copyright, on OMB circular A-21, and on GPO distribution of books and documents in microform, in addition to all the other on-going activities. I would like to report briefly on some of these items.

On Title II-C appropriations for fiscal '79, as Tom Bartlett indicated this morning, there is still opportunity for the five million dollars being increasd to ten million or fifteen, if we really continue to work on it. In the words of some of the lobbyists, we have failed to find for fiscal '79 what they call a "tiger" on the committee, that is, some member of the committee who is really willing to speak up for this particular item. They all have so many interests they are already committed to that it is very difficult to get them committed to one more interest like Title II-C. But we should not stop trying.

Last year, for fiscal '78 appropriations, we did have Senator Eagleton on the Senate side, who was willing to speak up in favor of Title II-C (with the assistance of Senator Brooke). On the House side, Representative Flood himself was the tiger. We do not know how much he will be willing to speak for this particular item this year. We might have to find another tiger on the House side. My expectation is that, on the House side, they may be more interested in restoring funds for Title II-A and II-B. Remember, these are zero funded at the present time, and they create a distinct handicap in trying to get more money for Title II-C.

The scenario might be something like this: I am just guessing that the House may restore funds for Titles A and B, but the Senate, if we keep working, may be willing to increase the five million to ten million or more. Then, of course, the House and Senate would compromise the difference. So we should not stop being interested, concerned, and active in terms of further contact with these key Congressmen.

Certainly, if you hear of anyone who is interested in becoming a tiger, please let me know. I want to underline that they really are much more interested in hearing from you than they are from me. They will listen to you. To me, they might be just polite. So, I urge you to continue your work.

In terms of getting the program going in fiscal '78, I am again very pleased to report -- and I would like to share this portion of the report with Dick Hays of the Office of Education -- that the administration of Title II-C for fiscal '78 is progressing well. You may know by this time that the total

number of proposals received was one hundred and one, totalling approximately twenty-seven million dollars in requests. The Office of Education did organize a twenty-seven member panel to review these proposals, and nine members of that panel were active ARL directors. At least another nine were ARL-associated or research-library-associated, so I think we can really be assured that we had a high quality panel reviewing these applications.

The procedure was handled very successfully, and I believe most of those who participated were very pleased with the process. Some of those who participated are here and may be willing to comment further on this procedure. As a result, approximately twenty proposals will be funded, using the total of five million dollars which is available. My guess at the moment, although none of us knows who the winners will be, is that at least three-quarters to four-fifths of the proposals funded will most likely be ARL libraries. Of the one hundred and one proposals received, at least sixty represented ARL libraries directly, as applicants, and at least three more ARL libraries were involved as participants in the proposals.

In summary, I would say that, for a first year effort, this was a well-organized and successful procedure in arriving at recommendations which will now go to the Office of Education staff and then to the Commissioner for his final determination. Really, it is unfortunate there was not two to three times as much money available because, with that amount, we would have been able to fund everything that had real quality. This gives us evidence of what we need for future years, and we will be able to use this to good advantage. One piece of useful information that was revealed during the review procedures: In the negotiations between OE and those who have been successful in applying for grants, successful applicants may request that the projects extend beyond twelve months up to eighteen months. Many of the projects are quite ambitious, and I think it would be very difficult for some of these to be concluded within a twelve month period. But there is a grace period of an additional six months to carry out a project.

The awards, I understand, will be announced in August, and the funds will become available for operation in October. October 1, 1978 would be the beginning dae, of the projects.

Do you want to add anything to this, Dick?

MR. HAYS (Office of Education): John, what I would add would be very brief, because I think you gave an excellent outline. I would like to extend appreciation from the Office of Education to all of those who helped us put the regulations together, because many members of ARL helped us to formulate those, and they are a necessity for any government program. I would also extend our appreciation to the many fine ARL members, including those two on the podium, for serving on our review panel. The real crux of moving this program ahead is, of course, allocating five million dollars this year, and that judgment is very difficult to arrive at. The quality of our panel will stand by us and be our guide, and I think we owe particular appreciation to all of those who participated.

As John indicated, this was our maiden voyage. It is also a very exhilarating year to get a program going, particularly after watching several administrations try to remove all library programs. This was a real plus, and we hope this is a good omen.

As John indicated, out of one hundred and one proposals, I would say approxiamtely eighty percent were of a high quality. Just looking at the scoring patterns, I have never seen proposed cutoffs as high and they will be on this program. As the notice in the Federal Register a few months ago indicated, the Commissioner's intention is to make about twenty awards. Since there are one hundred and one proposals, this means they will wind up with eighty-one disappointments. But that is the name of the game, and at least we have some money to distribute.

The Commissioner's decision to make fewer awards is based primarily on his judgment that this program should be used to encourage excellence. To do that, it is better to make fewer awards of a substantial nature than to make more awards of a lesser nature. If you wish to comment on that, you are certainly welcome, but I think, after discussing the matter with the panel that was with us a couple of weeks ago, that number might make some sense. Depending on whether the program is extended for several years, I think the distribution pattern might work out to the nation's benefit.

As John also indicated, the awards will be announced in August. We might just remind our colleagues here that there will be reauthorization coming up in the near future. As well as needing appropriations, we also need to make sure we have the foundation of our programs, that is, authorization. This program will last us through '79, and, of course, there is the possibility of an automatic extension for one year. But it is not too early to start thinking about the requirement for reauthorization. I would only agree with what John said: If the members of this Association, of all associations, are not heard from in the political process, this program will not flourish as it should.

MR. LORENZ: Thank you, Dick. Fortunately, we do have the Commissioner's' direct and specific interest in this program, and, unofficially, we understand the Commissioner is continuing to support this program into the planning beyond fiscal '79. In other words, the Commissioner is contemplating that the authority for this program will continue into 1980. Certainly, again, our support will be necessary to get that into legislation.

I think, when the results are announced, it will be very clear that these awards are primarily for national library development programs in the national interest and that the results will definitely strengthen research collections and improve access to research collections.

Are there any questions any of you might have? Yes.

MR. KIDMAN (Southern California): I do not think there is any question in any of our minds that this is a program we have been looking for for a long

time. A notion that we would begin to support major collections and make them available across the whole country is something we have all hoped for, but the nature of this first try has some very confusing aspects to it. For example, I do not see how we can compare "institutions", which acount for sixty points in a total one hundred and ten, when the institutions are so different.

For example, you are asked to furnish the number of Ph.D. programs, the number of doctorates, and, if you take an institution like an academic institution, that makes sense. But you also have to include a library like the Huntington Library. How are those things going to be compared? It seems to me, as I envision how these poor people are going to decide where these things are going to go, I see them in a big warehouse in Washington awaiting the exhibits, trying to decide how this is going to work. I do not see, in the nature of the document, any possibility for making a really good decision, and I think that is unfortuante.

I also understand this may be necessary, because this is a first time. Nevertheless I certainly support this program, and I think it is the direction in which we ought to go.

MR. LORENZ: Thank you, Roy. Actually, when you finally see the announcements, even though none of us knows what these awards will be, I expect the results will show that, even though the quality or the strength of the library added up to sixty points, this will not be the final deciding factor in how the awards are actually made. I believe this will surprise many of you when the announcements are made. There has been some leveling in the evaluation process to take this weighting into account.

MR. KIDMAN: Are you suggesting that guidelines have been changed without putting them in the Federal Register?

MR. LORENZ: No, the library itself is rated for sixty points, and the project itself is rated for fifty points, adding up to one hundred and ten. Any other questions?

UNIDENTIFIED SPEAKER: Just a minor technical question. Does this suggest that the accounting for this will be on the new Federal fiscal year basis?

MR. LORENZ: That is right.

UNIDENTIFIED SPEAKER: Is that, in turn, implying that the Federal government will be gathering statistics on institutions on that fiscal year, rather than our fiscal year?

MR. LORENZ: Well, when you make your application, you would have to make it on the latest information available.

UNIDENTIFIED SPEAKER: I was thinking of other data gathering procedures. I do not see any conflict here.

MR. LORENZ: We have information we will be able to share with all of you. The applications themselves will be improved in the second year. One thing that we will be able to make available is some indication of how the points are assigned by the various criteria. If you had had this in this first go-round, we would have had better applications. There was difficulty in finding information in the proposals which corresponded to the criteria, in order to assign points.

MR. BOSS (Princeton): I think the point you made about twenty-seven million dollars in applications against five million dollars in available funds being a compelling argument for seeking additional funds in future years is a very good one. I would like to urge that you consider going one step beyond that, that you solicit from the membership, perhaps even at this meeting, copies of the abstracts of the proposals they submitted, so that the ARL office might use excerpts of these abstracts in developing a case for Congressmen, Senators, and other appropriate people based on the kinds of things that might have been done had funds been available. I think that is even more compelling than just funding projects.

MR. LORENZ: Very good suggestion. One outcome of the examination of this evaluation procedure was the request that every future application have an abstract. Many did not this time. We feel that the abstract would enable all of the evaluators to see what the totality of the applications were in a quick scan. They would then be able to concentrate on the particular applications they were going to evaluate, and put them in a total context. This time, we were not able to do that. That is a very good suggestion.

MR. BRYANT (Harvard): John, of the one hundred and one applications, how many were from libraries technically qualified to make applications? Were some otherwise?

MR. LORENZ: Technically, any library was qualified. Rating the one hundred and one against the sixty points, I would say, off the top of my head, that thirty would really not rate very high against the sixty points.

MR. DAGNESE (Purdue): John, I was curious when you mentioned the fact that the Commissioner had allowed an extension to eighteen months for these proposals to be carried out. Did I hear you correctly?

MR. LORENZ: No, evidently this is part of the regular procedure in the Office of Education. Even though a grant is made for a particular year, in the negotiation on that grant, the successful applicant can request up to an additional six months. This is not any particular allowance for this program. Am I right, Dick?

MR. HAYS: Yes, that is absolutely right. When you are given an award for one year, that year can be an eighteen month-year, if you have a good reason for it. Given extenuating circumstances, we could push beyond the eighteen months, should contracts have a particular problem.

MR. DAGNESE: I need further clarification. A number of us, myself included, submitted a proposal that asked to run for two full years. It was not submitted as a one-year proposal. It was felt inappropriate for us to expend that kind of money for a single year. Do I understand that there will be no multi-year grants made? Were all of them expected to be a twelvemonth proposal?

MR. LORENZ: No, you are invited, I believe, to submit second and third year proposals. However, we have no way of knowing what the evaluation or the grant decision was on any particular application.

MR. DAGNESE: I am sorry, I am not asking about my own. I am asking for a clarification, especially for the next time around...

MR. LORENZ: Yes.

MR. DAGNESE: ...That it be specifically stated that this must be a quarter of a million dollars, or whatever is to be expended in a single year, or whether these applications may be multi-year submissions for a quarter of a million dollars, or whatever.

MR. LORENZ: I think I should ask Dick to respond to that.

MR. HAYS: Your question is about a multi-year project. I think we are allowing and reviewing proposals that would extend up to three years, but the award would only be made for one year. You would not be given an award this year that would last for three years. You would be given the first segment of that, and you would have to come in again next year for the next segment. The decision on the continuation of your three-year project would depend on the quality of work, your track record during the first year, and how the panel felt about the quality of your extension proposal.

MR. LORENZ: To say it another way, if, to accomplish what you want to accomplish, you need more time, you would request the funding for one year, and then, in the negotiations, if you were awarded the grant, you could negotiate beyond the one year. Any other questions.

MR. BOSS: One of the things that is unclear -- perhaps those of you who have an overview of the applications could answer this -- is what are the attitudes towards indirect costs or overhead on these grants? It is my understanding that some institutions submitted none, and others went up to sixty-plus percent. Is there any feel you can give us as to the appropriateness of the indirect cost element?

MR. LORENZ: The applications I saw seemed to crank in the institution's overhead percentage. Would you agree with that, Ray?

MR. FRANTZ (Virginia): Fairly consistently.

MR. LORENZ: Okay. Again, I would say that the general observation will be that these projects are in the nation's interest. We have begun a good track record in terms of the quality of projects, and this should help us in future funding.

* * * *

Moving on to copyright, I believe the most important development in the last few weeks has been the receipt of the CONTU draft report on library photocopying. I am pleased to tell you that this report did not recommend any amendments to Sections 107 and 108, which would affect library photocopying. The report did recommend one amendment which would require commerical copying mills to put warnings about copyright infringement on their machines as well.

In the testimony of the six national library associations, we commended the major conclusions of the report, namely, that there be no amendments that would affect library photocopying, and we urged that any amendments on commercial copiers make very clear that this did not affect the rights and privileges of library photocopying in 107 and 108 in any way. In our testimony, we also discouraged publishers and author groups from issuing any further unilateral, unofficial interpretations of 107 and 108, and we asked them to wait for the five-year review, based on the present law and the Congressionally-approved guidelines. I am very pleased to tell you that one member of the Commission, Dan Lacy, specifically joined with us in this expression. I would say that the test of whether we were listened to will be whether the additional unofficial guidelines of AAP for academic and pubic libraries do, in fact, appear, or whether the authors and publishers do cease and desist in this practice.

There was also a great deal of speculation in the draft report on the possible copyright problems of a national periodicals center. The report of the six national library associations recommended that such speculation be eliminated from the report, because it could have a chilling effect on any plans and specifications which were still in the process of being developed. Whether this is listened to we will not know until we see the final report.

One member of the Commission asked us rather off-the-cuff how the law was working, in general, as far as libraries were concerned. In turn, we had to answer off-the-cuff. The general impression was that libraries are coping pretty well with the law and guidelines. There is a diversity of interpretation going on out there, but, after all, this country was built on diversity, so what is wrong with that? In effect, we did not think that anybody was really being badly hurt, be it libraries, publishers, or the authors.

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Concerning GPO documents in microform, the public printer held two meetings in mid-April, one of the Micro-Publishing Council and one of the Depository Library Council. Fortunately, Nancy Cline of Pennsylvania State University is a very effective representative for research libraries, and I have a

few highlights from her unofficial report. I have more details which we can give you later.

On the question of silver halide versus Diazo film, some further research was warranted. This question was raised, "Do research libraries want permanence in film, or do they want silver for some other reason?" Perhaps a standard for permanence and durability is what is really needed. So, we will have to mull that one over. Information indicated that some regional depositories who were supposed to supply copies later do not, in fact, provide duplicating services. So there goes that argument. Field tests may be made to determine how various types of microform stand up under a variety of conditions.

GPO still plans to begin the distribution of some titles in microform in 1979, and a new list of titles is being developed. Lastly, a subcommittee of the Micro-publishing Council was set up to establish a standard costing procedure for the Public Printer on microform versus hard copy costs, so that this information could be applied objectively to his decision-making.

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On OMB circular A-21, Tom Bartlett covered this topic quite effectively this morning. The ARL Office has submitted a letter to OMB protesting the removal of weighted headcounts which differentiate between research use of libraries and undergraduate student use. We pointed out that the budget formulae being used in research libraries (and that have been used for many years) do reflect the weighting process. As you heard from Tom, a committee of officials will be meeting on this issue in Washington on May 10th. In the meantime, the deadline for comments to OMB has been extended to June 15, and I would reiterate what has been said by other sources, there is still a good chance of turning the OMB position around.

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In terms of the ARL Office's communication with you, we are continuing to do the best we can through the Newsletter, which we have now scheduled to appear regularly in February, April, June, September, and November. There will also be special mailings to keep you informed of committee developments. We hope you will continue to keep us informed of items you wish to share with your colleagues through the Newsletter. As Jim Beattie pointed out, we do have the new brochure, and we will be interested in your response and reaction to that. In effect, let us know what you want us to know, and we will be glad to let you know what we think you should know about developments in Washington.

In conclusion, I would like to say that, both personally and professionally, one of the happiest developments in Washington in the past several months has been Jim Haas's arrival on the scene as President of CLR. I am very pleased that later in this program you will be hearing from Jim and Duane Webster concerning some of the results of joint planning between CLR and ARL that has already taken place.

Again, it is a great pleasure to work with all of you, both individually and collectively, and I trust that you will continue to support us morally, politically, and financially.

Report of the Committee on Preservation of Research Library Materials

MR. STAM (Johns Hopkins): I am sorry to say it is news to me that I am giving a report today, but I can do so. Briefly, we were hoping to have a meeting of our Committee at lunch today, but it has been postponed until tomorrow. As some of you may know, there has been some disarray within the preservation field at the Library of Congress during the last six months. Our Committee met in depleted form at the Library of Congress last Friday, and we had a very interesting day. One of the problems of reorganization within the Library of Congress is that the departure of Frazer Poole, and the limbo created by that departure, meant quite a hiatus in the activity of the advisory committee to the National Preservation Program. I was assured by Norm Shaffer last week that he will be calling a meeting of that committee shortly. So, all I really have to report is a kind of interim passivity on the preservation front, which is nothing new. It goes back to the sixteenth century.

Report of the Task Force on ARL Statistics

MR. TALBOT (Massachusetts): I will take just a minute or two, as we have only a very brief report. As you know, most ARL members have received a questionnaire on statistics. We are hoping to get the results back so we can analyze them and see if you look favorably upon what we have done so far.

We are looking at two other projects which we hope to propose during the course of the year. One is to put the historical data of ARL statistics into machine-readable form so we can do some kind of time-history analysis on it. The other is to work with Gene Palmour on statistics. That really is all I have to report. If any of you have anything you would like to ask us about, Don Koepp, Sue Frankie, and I would be glad to meet with you.

MS. ABELL (U. Calif., San Diego): I would like to make a comment on the last report. I think many of you received copies of both the questionnaire from the statistics task force and the regression analysis. I read them with great concern, and I would like to call your attention to the questionnaire once again. My concern is that a budget officer looking at positive residuals will leap to conclusions without stopping to ask a number of very important questions. I think it is extremely important that we think very hard before we allow those data to get into the public domain.

MR. FRANTZ: A key point has been raised. Are there any further comments? Would anyone else like to speak to this?

MR. DE GENNARO (Pennsylvania): Penny's comment catches me by surprise. When I saw that data, I thought it was very interesting and I still think the

Task Force ought to get it out. We cannot always assure that data will be used in the ways we want them to be used. Somehow or other I think we ought not to suppress that kind of thing, even though it could be possibly misunderstood and possibly misconstrued by budget officers.

Report of the Task Forces on National Library Network Development and Bibliographic Control

MR. DOUGHERTY (U. Calif., Berkeley): My report can be brief. I can let you know that our Task Force has been engaged in what we call "group grope" for several months. We came to the conclusion that our charge was inextricably tied with that of the Task Force on Bibliographic Control, so today we had our first joint meeting. I believe we began to sort out some of the issues. If we are successful at a continuation of that meeting on Friday, I think we will be prepared to issue a statement or progress report soon after. It had been suggested that we might pursue the idea of devoting a small part of the fall meeting to the subjects of the task forces on bibliographic control and networks.

Report of the Office of University Library Management Studies

MR. WEBSTER: I would like to report on the discussion that has been held over the last six months concerning the future of the Office. As you may be aware, the current funding arrangements for the Office expire in September of this year. Consequently, we have been actively pursuing means of supporting the Office in the future. As a prelude, I might comment briefly on some of the background that has contributed to these discussions.

The OMS has existed for eight years now, operating basically three programs: a research and development program, an information exchange program, and a library management training program. From those programs, a number of products have been created. Most important, though, has been the development of a series of organizational change strategies, namely, the Management Review and Analysis Program, the Collection Analysis Project, and the Academic Library Development Program. Those three organizational change strategies provide a systematic way for individual libraries to look at some of their common problems in a way that can engage the entire staff and the entire university community in doing something about them.

Our experience with those programs has shown that, first, it is possible for very large, complex libraries to complete the different selfstudy procedures. Second, there has been reasonable evidence to suggest that those selfstudies can result in important changes in the way a library operates and in the programs and services it provides to users. Thirdly, it has been concluded, particularly by the Collection Analysis Program Advisory Commitee and the OMS Advisory Committee, that these resources and services should somehow be made available to the academic libraries that are not a part of the Association.

With this in mind, and with the interests of the funding agencies in mind, we wrote a proposal for a project called the Academic Library Program (see Appendix - D). Essentially, this is a five-year effort to make the range of self-study and change strategies I have just talked about available to both member and non-member libraries. It is fundamentally a consolidation of such available techniques as MRAP and ALDP and the support necessary to make those programs available. In addition, this new program will make provision for designing new processes, especially a program to look at library services, and it will include an effort to reduce the size and scope of MRAP to make it a somewhat briefer event. We will also design some simple, easy-to-operate organizational screening pocedures.

Beyond that, we have included in this program a facility for training consultants. We will be training a corps of talented librarians who will use their newly-acquired skills to consult with non-member libraries interested in taking advantage of the change techniques we have developed. So, we are building into this program a major effort to select and equip talented young librarians to provide assistance in the operation of these programs by a large number of other libraries. The final component of this program will be an effort to help libraries actually do self-studies. That is a very brief review of the program. We will be making available a more detailed description later.

I might, though, comment briefly on some of the decisions that have been made in relation to that proposal. First and foremost, the ARL Board of Directors has voted support for this project. Furthermore, it has agreed to provide a certain basic level of funding for the operation of the program over the five-year period, namely, fifty thousand dollars a year, which is roughly twenty percent of the budget. The Council on Library Resources' Board of Directors met last Saturday and agreed to grant the Association $326,500 for this program. Again, the CLR grant will extend over a five-year period. Furthermore, we have submitted a grant proposal to another foundation for $250,000 to help support this program. We have indications that the foundation is very much interested in helping to operate the program, and we expect a decision on that grant request will come through in roughly the next two months.

I should say that the financial arrangements for this program are still evolving. The two fundamental decisions by ARL and the Council have been made, but there are other decisions which remain in process. I suspect favorable consideration, but I should emphasize they are still in a discussion stage. The other decision involves securing financial support for the actual conduct of these studies in individual libraries. That money would be going directly to libraries to cover some of the costs of operating the studies at the individual institutions.

What does this mean for the Office and the Association? I think there are clearly some benefits for the membership here. With this kind of support, the Office will be able to continue providing the range of services and resources it has been providing over the years, namely, information services,

training services, and direct consultative assistance in the form of these selfstudy programs. The most important aspect for us in the Office is, of course, the fact that we will now be assured of stable funding over a period of time. In addition, I think there is some real prospect here of strengthening the resources and services we are providing to the membership, and I have had some indication from members that there is considerable interest in some of the new strategies we are talking about. That is the major development in the operation of the Office over recent months.

In terms of some of the activities of the OMS, we have had a rather full schedule in the publications area. The Systems and Procedures Exchange Center continues providing a series of kits on a monthly basis. Since the last membership meeting, we have issued flyers and kits concerning collection policies, remote storage practices, basic skills training being offered in libraries, collection assessment programs, resource-sharing activities, and automated circulation systems. The automated circulation publication was just issued, and all of you may not have received it yet. Upcoming topics include reports on automated systems and catalogs, fringe benefits, library service programs, and personnel functions.

I might say, also, that since Maxine Sitts has been with us as Coordinator, she has made quite an effort to reformat, revise, and up-date the earlier kits to insure that they have timely information in them.

In the training area, we are finding that our Library Management Skills Institutes have gained a certain degree of popularity. The Institute last November, for example, had forty-two librarians participating. I think you know that the Institutes involve three days of intensive instruction in such specific management areas as communication skills, leadership skills, decision-making skills, and group dynamics. In response to the growing interest in these training events, we have scheduled three management skills institutes for this year. The first one is scheduled in Chicago later this month and is fully subscribed. In fact, we have a waiting list of about ten. The other two institutes will be held in Boston, July 18th through the 21st, and in the Washington area, November 14th through the 17th.

In addition to the institutes, we operate a training film program, which continues to expand its coverage of films, the most recent acquisition being a film on Performance Appraisal, which is now available to members.

Also, we are making available to member libraries special focus workshops, which are one- or two-day events that we design in consultation with the member library. For example, I recently worked with the University of Kentucky's staff in putting together a one-day workshop on the topic of "Current Trends in Library Management, and Their Implication for Professional Staff".

We also have received two small grants which underwrite short projects. One, from the Wilson Foundation, will help support the design of a series of resource notebooks. These will include selected materials from the MRAP stud-

ies and the Systems and Procedures Exchange Center files, with each notebook focusing on a broad organizational topic such as organization, planning, or staff development. We are just starting that project, but we expect to have those products available by the end of the year. The other small grant we received, again for roughly twenty thousand dollars, underwrites our organizing and conducting a workshop for Japanese bibliographers and curators, looking at the whole topic of development and maintenance of Japanese collections in research libraries. We have secured that grant from the Japan-U.S. Friendship Commission. Those are the major developments.

UNIDENTIFIED SPEAKER: You might mention the continuing support of CAP.

MR. WEBSTER: Part of our effort to obtain support for the Academic Library Program involves securing some transition funds to make the Collection Analysis Project an integral part of the full Academic Library Program. Initially, there will be a transition period for which we are asking roughly $40,000 and during which we will revise the CAP manual, which I might say has been used successfully in the three initial pilot studies. The transition period will occur between June and October of this year. During that period, we may start two, or possibly three, additional collection studies.

The three initial studies took place at Arizona State, MIT, and Berkeley. The reports from those studies are now available. The Arizona State and MIT reports are final reports, and, if you would like to see those, you can ask or write to the Office. The Berkeley report is an interim report, and we expect the final report on that study toward the end of this year.

Special Report: The Council on Library Resources

MR. HAAS: I was not quite sure how I was going to start, because this morning I went out to pay the bill, and I saw an asterisk by my name. It said "guest". That gave me kind of a strange feeling, having been a non-guest member of this organization for a good many years. But it is good that you asked me back at least once without any financial requirement or anything like that.

Pat Battin, who has assumed the burden of all those responsibilities at Columbia, said she had a question for me, and I think probably I will steal her thunder. The question was, "What are your qualification for this job?" My answer was that, if she had to ask, I obviously did not have any.

It is an interesting job, I think. I do not intend to speak, and I am not reporting for the Council or anything else. I am just taking this opportunity to think out loud a little bit -- hopefully with you. I would welcome questions before I start talking, which would, perhaps, make it possible for me not to talk at all, or I would welcome suggestions. Hopefully, at the end of the brief comments I have, you will say what you think and begin a discussion, because one of the Council's long-term assets in the twenty-some years of its existence has been its role as mechanism for helping members of the

research library community move ahead collectively and talk with each other. In that way, not unlike ARL as an organization, it has a role.

The Council, through the years, was funded exclusively by the Ford Foundation, and it is in just this last year that the range of supporting organizations has increased somewhat. This year the general grant of the Ford Foundation has been supplemented by a very welcome grant from the Carnegie Foundation, especially to expand in the area of management. Duane talked about that, and maybe I will talk a little more about it later. As I said, I do not intend to speak, nor was it intended that I speak. I was asked just to discuss a bit where I was going. I will be informal.

Despite rumors to the contrary, I left Columbia voluntarily. I took on this job because I had been convinced for a long time that some kind of cohesive, nationwide library program, focusing on the needs of the users of research libraries, was required if we, as university librarians and research librarians are to do the job we are charged with doing. I guess I took the job because the time seemed right. Listening this morning to Tom Bartlett and the Vanderbilt President, it is clear that the time is right. But it has been ripe for some time, and if we do not do something pretty soon, maybe the time will be past.

The Council, as an organization, will do what it can to help bring into being a nationwide library organization. I think I am probably less certain how this should be done than some people are, but I think maybe what we need is to develop a capacity to operate collectively on some of the fundamental issues that face us both individually, as librarians, and as institutions.

The Council's program is a well-established one, and, obviously, one does not go in and turn it three-hundred-and-sixty degrees and go do something else. It has grown out of a set of clearly perceived needs, and it has moved forward, in one direction or another, as opportunities have developed. I have been thinking over the last few months about where the Council should go next. Obviously, we must capitalize on all that has gone on before. Simultaneously, we must try to be completely realistic and bite off what we think we can chew, rather than go off in too many directions at once. I would say, parenthetically, that the funding status of the Council is somewhat different than it has been in the past. Over the last eight or ten years, there has been some two million dollars a year available, specifically from the Ford Foundation. The amount available now is substantially less than that, but that need not worry us, because there are a large number of foundations and, happily, agencies of the Government that take the research library problem very seriously.

I do not think I want to call it a problem. Libraries are not aware of the problem. Librarians and their administrators may be, so the potential for support is very substantial. It will be forthcoming, though, only if we zero in on where we want to go. We have to move forward together to do certain fundamental things that need doing, if the nature of research library operations is to move ahead in a productive and qualitative way. I have here five

general areas that need attention, and where, in fact, attention has been given in the past. But the approaches we are hopefully going to be taking, if not new, will at least represent some substantial change from the past simply because some new steps seem possible at this point.

At the top of the list is the general subject of the procedures of bibliographic control. I guess, standing back, one could say that, by and large, the traditional bibliographic procedures of libraries once were moving along farily well. Right now, we are in a period of fairly substantial turmoil, I think. In the first place we have decided to put computers to use in bibliographic control. I wonder what would have happened if we had decided in a different direction. Bill Welsh is sitting there nodding. He wishes we had decided. That decision, I am sure, is not wrong at all, but that very decision to cover the next period of time by switching to computerbased bibliographic systems in this country has brought about implications of far greater complexity than anyone would have anticipated. Secondly, in the field of bibliographic control, we have a tendency to keep changing the rules, which sometimes complicates life. These two facts together have brought about a set of problems that are not trifling.

In the last decade, individual libraries, in some cases groups of libraries, have made very remarkable progress in the process of applying computers to bibliographic control procedures. But we are still far from a comprehensive bibliographic control system for libraries. To achieve that is one of the activities the Council is trying to help a great many libraries move forward with. Specifically, the Library of Congress has, over the last year or so, supported a series of meetings involving a national advisory committee. A subset of that group focused on the technical issues to begin laying the groundwork for a national bibliographic system. There are many parts to that undertaking. On the one hand, it involves building data bases themselves in a rational way and finding ways to maintain those data bases. Even the process of building the data base must be a cooperative venture, certainly not the undertaking of a single library.

What kind of projects are we going to look for out of these computerbased systems? Far too little thought has been given to that subject. We are inventing a capacity, but we are not sure to what use we are going to put that system.

Another area needing thought is the development of network links themselves. Obviously, we need a communications network to link the parts together, so that they can both benefit from this new capacity and contribute to it. Then, on into the future, individual libraries and groups of libraries have a great deal of work to do to find ways to put this new capacity to effective work.

I will not go into a great deal of detail here. Let me say, however, that the Council, the Library of Congress, and a number of individuals participating in the venture have laid out a strategy that, over the next five years or so, will produce not the complete, neat bibliographic system, but

hopefully the main components of that system. This should move us ahead another fairly substantial step toward bringing into being a national bibliographic system.

I think we really do not know how complicated it is. We are certain we have to have the capacity to carry out the development in a rational way and in a way that is credible from the point of view of the funding agencies, because the amount of money we are talking about is somewhere in the neighborhood of five to six million dollars, at least over the next five or six years. I think the money is available, but it will be available only if there is a clear feeling that the enterprise is well managed and that the interested parties are pulling together on this, rather than working competitively. It is also fundamental that the agencies be convinced that the end result will improve the quality of the process and ultimately, if not reduce the direct cost of bibliographic control, at least make sure the dollars being spent are being spent as effectively as possible.

A second area of concentration for the Council is helping to develop a more rational approach to research collection development on a national basis. One aspect of that effort is the actual development of a plan for a national periodicals center. You remember that, just about a year ago, the National Commission on Libraries and Information Science completed a year-plus effort designed to assess the need for a national periodical library. NCLIS concluded that such a venture was an important undertaking, and asked the Library of Congress to pursue the matter. LC, in the late fall, turned to the Council and asked if the Council would take the next step, that is, to lay out a detailed plan for actually bringing a center into being. The Council agreed to do so and started work on November 1st. We will complete the project on June 30th. In fact, before I left Washington yesterday, I was handed a copy of the draft of the document itself.

The plan will be reviewed in Washington on May 16th and 17th by a group of people called together by the Council, including representatives of ARL's own Lending Library Task Force. We, in fact, met with that Task Force once about three or four weeks ago.

The objective here is to lay out a detailed plan for a national periodical center. Hopefully the project will be useful to whatever organization or agency runs the national periodical enterprise and assumes the responsibility for bringing it into being. I think there will be some surprises in it, because one of the things we are trying to do is address the problems that exist in the publishing world relative to a national periodical center. We are trying to address them in a constructive way, and I think the Task Force has been working well on this. Lee Jones of Columbia has been on the Task Force. We have also had some outside help, such as in management and the record system, and so on.

The third area the Council is working on Duane Webster talked about a bit today in his description of the Academic Library Program. One of the hazards I see is that librarians and libraries are in the process of developing

some rather remarkable national capacities. I am talking here about the National Bibliographic System and I am talking about a national periodical library, a national lending library, and a concept of national lending. All of these new ventures will provide opportunities for individual libraries if they prove useful, but they will also change the characteristics of libraries. Hopefully, they will change even the definition of a library in the minds of research faculties in universities, because we are moving towards a kind of interdependency that is very real.

Given the pressures that we were talking about this morning concerning the monitoring of the way we spend our money, and given that you have an unclear set of activities going on in the character of higher education itself, it is clear that individual libraries -- and I am talking about libraries of all kinds -- are going to have to continue the process of making changes, a process that clearly has been underway for some time. The Academic Library Program that Duane described before the coffee break is an example of the Council and ARL working jointly, hopefully with the heavy involvment of the American Library Association, to set up a capacity to make change in academic libraries. I am talking about both two- and four-year liberal arts colleges, as well as universities. What we intend to do is train some troops so that individual libraries can themselves take some initiative. I guess we actually have a target of training as many as a hundred consultants in the course of five years, so that hopefully, in the long run, as many as three hundred libraries of all kinds will take advantage in one way or another of this new capacity to make change.

This does not mean forcing them all into the same mold by any means, but simply letting each one decide where attention is required and finding a way to help move in that direction. The Council's contribution to this venture really comes from the grant of the Carnegie Corporation to the Council.

A fourth area of concern is that of professional education. That has been on the agenda of the Council for quite a few years, and has not moved very far. It is clear, though, that a dramatic change is about to be made in the process of professional education. Research library management and the staffing of academic and research libraries both present a substantial problem. I think we have to face up to it. I have not the vaguest idea what to do about it. I have a few ideas, but I am not going to tell what they are. We would welcome any thoughts, observations, and ideas that come out of this group, because, in the end, the health of research libraries is not really a question of how much money is available, but a question of how much skill is available. It is the development of skilled people with an underlying philosophy that is central to our interpretation that is important.

All of the things we are talking about here are well and good. A lot of them have been talked about for years, and for years, I guess, some of us have felt there is some kind of a missing link. Research libraries are not, I think, going to be able to depend on someone else to solve their problems. They are going to have to be solved by the research community itself. I think it is clear by now, listening to our two speakers this morning, that we have

to develop some operating mechanisms to help bring into being and actually run the set of primary activities which will enable research libraries to transform themselves. No one else is going to do it

For seven or eight years, maybe more, we have had the National Commission on Libraries and Information Science, and it has been an interesting and important addition to the scene. But it has not been an operating agency in itself. The National Commission has been a kind of promoter in the best sense of the word. And it has a very useful future ahead of it, in trying to make certain that all of the components of the society that are interested in libraries, interested in the information process, and interested in putting information to use are given a place to speak their piece. I think it has an obligation to help develop an educated population which knows how to put information to use. But it is not an operating agency. It is clear, as we talk about national lending libraries, periodical centers, national bibliographic systems, what have you, that research libraries have a set of requirements which they cannot be completely dependent on the Library of Congress to fulfill. I think the Library of Congress knows full well that it can in no way assume the obligations for the country in this reserarch library area. It is a major contributor to bibliographic control. It is a major contributor to preservation activities, but at some point, the research library community is going to have to stand up and somehow take the lead in generating support for some kind of an operating agency, a "National Library Board" is the term we have used somewhat.

I talked about this a little bit at American Council of Learned Societies a week or so ago. I think something like that is going to be required, as we listen to the Center for Research Libraries talking about converting itself into a national lending library. It needs some kind of a governing agency. We talked at the Library of Congress about bringing this into being. They have a committee on governance for the national communications network. From those discussions, it is evident that some kind of mechanism is going to be needed to oversee the communications network. The bibliographic structure itself is going to require some kind of purposeful, careful attention, over a long period of time, to make certain all of these parts come together and we end up with a national library system.

When I use "national", it is a lower case "national". We want a library system that is nationwide. In some way, that has got to be found. I do not have the answer any more than anybody else does, but for years, I felt the need for an operating mechanism designed to support the primary objectives of research libraries, a mechanism which could give those libraries some sense of assurance of continuity of programs. It would provide a way for those libraries to speak with a single voice, and, I think equally important, a way to communicate with the other parts and components of the system of scholarly communication.

As you know, there has been a group in ACLS, over the last year or so, concerned with the process of scholarly communication. This group is looking at the linkages between journal publishing, scholarly libraries, and what have

you. It is clear that, if we are going to make substantial changes in the process, not simply refining infinitely what we do now, some new mechanisms are going to be required. When we talk lending libraries, we also talk about a switch to unpublished material. We are talking about blurring the distribution function of publishers and the distribution functions of libraries. I guess I would conclude by saying the country still is not interested exclusively in libraries. It is interested in functions and procedures that need to be carried out if the process of scholarship, the process of teaching, and the public good is to be watched out for.

We are interested in processes more than we are the established means. I think that, as we look at these sets of activities from a functional point of view, we are going to have a look also at the structure that exists to carry out some of these functions. That has led me to the conclusion that some kind of an operating mechanism seems required so we can get on with the work of actually doing some of the things we have talked about for so many years.

MR. ATKINSON (Illinois): Jim, I certainly support those efforts that you are carrying on in the Council, and the general thrust of all the things you said, but I did read your article in the Library Quarterly, and I have some worries about the National Library Board -- not very strong ones, but ones I would like to voice. They are the same ones Mr. Bartlett talked about this morning. He suggested that there are certain continental ministries of education which have attempted to meet the very need of priority setting by forming rational plans for higher education in those countries. We can see disaster happening there. We see unresponsiveness, state interjecting of research, and students throwing bricks at their professors.

I think I see some real danger in the National Library Board doing something of the same sort. I would be concerned about any board which would have the kind of authority I have seen in states which had real control under the guise of "coordination" because of the way the budgets worked. It works the same way as the national highway system, for example, which has leverage by just withholding money. That kind of thing is very dangerous. I would hate to see a board which Daniel Boorstin and Fred Kilgour were all controlled by, because I do think there is some reason to have diversity and to work through private foundations like the Council and associations like ARL to arrive at national policy.

MR. HAAS: A valid comment. I would say that I do not intend to be prescriptive here. Somewhat the same kind of comment came from the Council of Learned Societies. They are afraid of mechanics and of getting everything so systematic and neat that it is worth less.

MR. ATKINSON: Or that it does not work, like in France.

MR. HAAS: I guess there is no guarantee that the way we are going now is going to work either, and...

MR. ATKINSON: No, I think you can go on with the Board, but I think that what it does has to be clearly defined.

MR. HAAS: I am not going to do that. We should perhaps have some sense of the compositon of the Board itself. I would say, first and foremost, it should not be a group of technicians trying to figure out how to do this. The membership has to be drawn from the scholarly community: university officers as well as maybe a librarian or two.

It is essential that we try and find a way of making the most effective possible use of a finite set of resources. I do not think it necessarily follows that you have to get everything locked in place and have some very prescriptive organization who decides who is going to do what. That is why I underscored, I guess, that we have not a Federal library system, but we have one concerned with a nationwide set of objectives. I think yours is a valid warning. I do not automatically say you should not do anything, because of past experience elsewhere.

MR. AXFORD (Oregon): The French experience is not the only one in the world. As a colleague of mine remarked the other day, English social planning and the nationalization of their industries have not been notable for their success, but I do not think many of us here would be too pessimistic about the progress of the British Library and the planning that has gone into that system. So we do have models to look at other than France.

MR. ATKINSON: British libraries are not the ones I would use right now, and the British academic system is in great trouble. The latest reports say libraries should not have more than two thousand --

MR. AXFORD: That may be something that is worth debating at another ARL meeting.

MR. ROGERS (Yale): Jim, I wonder if you would comment on something that I think is bothering many of us. We know there has been, on the part of some people, an urgent request that we get behind legislation to create a national periodicals center. Is this something that you think we ought to get behind right now, or would it be wiser for a number of different interested groups to try to work on legislation to be sure that whatever goes into the hopper has some kind of unity behind it, rather than arguing this after the bill has gone in?

MR. HAAS: It is imperative that we go forward on this venture. I guess my concern -- and I have expressed it to anybody who has asked -- about focusing attention specifically on a national lending library is that, conceivably, it is too narrow a target. Personally, I think the processes of bibliographic control and the processes of developing resources for them are so tied up together that to invent machinery to do one and ignore the machinery to do the other is probably a mistake. I think something probably has to be established through legislative means, but the more general we can make that mechanism, and let the future take care of where it should go, the better I think it will be.

I personally feel very uncertain about saying that "this" and "this" should be done. But what we have lacked is a capacity to do things. I will let the wise people of the future decide what needs to be done, but I would like to help develop a capacity to actually do something on a national scale, collectively, in the interest of research libraries, and to rely on that capacity evolving with time.

I hope that ARL as an organization, the Center for Research Libraries, and everybody else who has an interest in moving forward will finally do so together. We are not in a competitive enterprise here. We have the same set of objectives. I just hope we do not set our sights too low. I think one of the failures of the profession of librarianship is that it sets its sights too low, considering that it is a very important element in the structure of society. I think we make a very fundamental mistake if we do not assume the responsibility and management that those words imply.

MR. WELSH (Library of Congress): Despite those reassuring words, Jim, it is conceivable that authorization for a national lending library and a library board could be secured and an appropriation request made for 1980. Does the Executive Board of ARL have any plans of bringing together this group again in the very near term, to answer Rudy's questions so that this proposal can go forward with unanimity. I have seen draft legislation, as many as you have. It is not to be ignored. I think there is a clear need for a national lending library.

I think there is also a clear need to broaden the scope of that library board. I think a library board is quite desirable, but I think the timing is such that I am just a little bit apprehensive, unless a group such as ARL does focus its attention in the very near term, that something might happen as Rudy suggested. We will be looking at the problem after legislation is introduced and passed.

MR. FRANTZ: I will say something about that in a minute, Bill. Are there any other comments? I think in the future, we may look back to this exchange we have just had, this discussion of Jim's presentation, as a pivotal point in our development. I really do thank you, Jim.

Now, just to follow up very briefly on Jim's comments relating to the development of a national periodical center, I should tell you the initial things the Board has done at this meeting. Allan Smith, who is Chairman of the Board of Directors of the Center for Research Libraries, met with the ARL Board yesterday to seek ARL's support for a resolution passed in mid-April by the CRL Board supporting the prompt introduction of legislation which would create a national lending library.

In addition, at ARL's invitation, Jim Haas met with the ARL Board to review CLR activities on the planning for the National Periodicals Center, and to discuss the concept of a National Library Board, which he has just described to you.

As a result of these discussions with Allan Smith and Jim Haas, it became clear to the Board that, although ARL, CLR, and CRL share much the same goals, further discussion, which involves a broader consensus, is necessary to determine the kinds of legislation needed to best serve these interests.

The Board decided that what is needed at this point is an ARL position statement, outlining issues and concerns regarding the organization and governance of a national lending library, as it relates to the concept of a national library board. After this statement is drafted, a meeting will be organized, in the near future, with representatives of key constituent groups to discuss the kinds of legislation needed and strategies for developing such legislation.

As you know, ARL has a longstanding interest and commitment to a national periodicals system. We currently have a standing commitee in this area, chaired by James Schmidt, which is charged with the responsibility of reviewing and monitoring current activities relating to the development of a system.

The Committee met several weeks ago with the CLR staff to review a partial draft of a plan for the national periodicals center. The Committee has also met here, and the committee members will participate with representatives of other library groups in a May 16-17 CLR meeting to review the completed CLR report. The ARL committee will be involved in planning the ARL position statement and the meeting to review legislative positions.

We will certainly keep the membership informed of these developments in as timely a way as we can. I think it is fair to say the Board very much shares your concern, Bill.

Increase in ARL Dues

MR. FRANTZ: The last item I have for this afternoon, fellow members, is a dues increase. We have had no increase since 1974, and you can say that our increases are far less than the average survival costs that arise. But the fact is that we will have a deficit in 1979 without a dues increase.

The Board urges that the ARL dues be increased from two thousand to twenty-five hundred dollars, and, if someone would make a motion to this effect, it hopefully could be followed by a second, and your Board would be much indebted to you.

MR. ROGERS: So moved.

MR. FRANTZ: It has been moved. Is it seconded? (A second). It is open for discussion. Do I hear any discussion? Hearing none, are you ready for the question? (The motion carried unanimously.)

This concludes our meeting.

APPENDIX - A

CLOSING THE CARD CATALOG: A SURVEY ON THE STATUS OF PLANNING IN ARL LIBRARIES

Richard M. Dougherty

The decision of the Library of Congress to close its card catalogs and adopt AACR II on January 1, 1980 will affect research libraries in many ways. The operational implications are just beginning to be understood, and it is becoming evident that the adoption of a new cataloging code could cost the nation's research libraries millions of dollars. Current uncertainty about what the changeover will require was pointedly depicted in the title of an article which appeared in the Chronicle of Higher Education, "A Ticking in the Card Files." Each ARL library director is confronted with an extraordinarily complex bibliographical problem for which there seems no facile solution. Even smaller libraries will not be spared, for they too will experience increases in card catalog maintenance costs. Will the benefits of the new code be worth the price? No one seems to know. In the meantime, research libraries must gird themselves for a period of unsettling transition.

In order to gain a better sense of the current status of planning, an informal questionnaire was distributed to the directors of ARL libraries. Each was asked to comment on the following issues:

1. Whether they had decided to close card catalogs and adopt AACR II
2. What planning had been accomplished to prepare for the transition
3. Whether resistance was anticipated from faculty or staff groups, and
4. What strategies would be employed to gain support from campus administrations.

In all, sixty libraries responded, most with thoughtful and some with detailed descriptions of what they had accomplished. Some also provided insights on what the future might hold. The survey results indicate that planning is well advanced in about 25 to 33 percent of the libraries that responded. At the remaining institutions, planning activity can be charitably characterized as preliminary or, more realistically, as just getting under way. It apppears that most libraries are still in a stage of problem identification rather than problem resolution.

The majority of respondents see no alternative to closing card catalogs and adopting AACR II in concert with the Library of Congress. Only a few directors indicated that they did not plan to close catalogs. These librar-

ies, it was assumed, will adopt a policy of superimposition, interfiling new headings into current card catalogs. Libraries that do not adopt AACR II must anticipate certain consequences, which were described by one respondent as follows:

> In a manual mode, the only possible alternative for our library is not to accept AACR II and to continue our catalog in its present form, using AACR. In reality, this option means that virtually all of our cataloging will be original, with economic consequences that are staggering. It also means that our bibliographic data will not be compatible with the growing national data bases, which will impact ILL transactions and any endeavors aimed toward resource sharing.

The majority of those who plan to close card catalogs intend to adopt some form of computer-out-on-microfilm (COM) catalogs. A few respondents plan to replace card catalogs using a combination of COM and on-line catalogs. Several directors noted that they will start an interim card catalog until a new form of catalog can be implemented. It had been anticipated that more libraries would deploy new card catalogs, but only a few directors proposed this alternative. Several respondents intend to take advantage of existing circulation software packages to provide users with author, title, serial and on-order information. These libraries currently have available computer power sufficient to consider seriously the linkage of catalog access with circulation systems.

Several respondents plan to use their OCLC archival tapes to construct or upgrade current data bases to conform with AACR II. This strategy, however, is totally dependent upon the availability of a software package to permit such a conversion. Unfortunately, there is no reason to be confident that such a package will exist at the time the Library of Congress adopts the new cataloging rules.

The most frequently cited problem was the lack of an authority control system to allow libraries to link old catalogs with new, and to upgrade existing MARC records. Some respondents believe that old and new catalogs should be linked; others are willing to discard this requirement. Among those who cite the need for authority control, there seems to be no agreement as to exactly what is required. There seems to be a general faith that a system will be available to libraries in 1980.

A matter related to authority control is record conversion. Will a library convert restrospective records, and, if so, how will this be achieved? Many libraries are undecided about whether they should attempt conversion, and, if so, what proportion of records they should convert into machinereadable form? There is also the question of who should do the actual work: a local library, commercial agency, or a library consortium. A group of Canadian libraries reported special funding to underwrite a conversion project. Other libraries expressed the hope that a project might be sponsored by the regional network of which they are a member.

Libraries that plan to adopt COM catalogs were not asked to provide specific details on equipment, format of records, strategy for file construction, costs, availability of space, etc., so that no reliable picture of planning emerged. Based on personal observation, however, it is safe to predict that detailed planning still lies ahead for most libraries. Considering the task, it would be advisable for libraries to begin work as soon as possible.

Libraries must question the advisability of continuing card catalogs because of spiralling catalog maintenance costs. One respondent framed this issue very clearly:

> A significant amount of staff, equipment, and space is required to maintain card catalogs. In an analysis of three large academic libraries, 22 percent of the total cost of cataloging was spend on the card catalog and its maintenance. The factors involved include: typing (and/or inputting), revising and producing catalog cards, sorting and filing the cards, sorting and filing the cards into catalog cases, purchasing card stock and catalog cases, replacing worn and missing cards, correcting entries that are changed or incorrect, and shifting cards and relabeling drawers during expansion. The size of the card file is a factor in the cost of maintenance. It is more difficult to file an entry into a large catalog, where there are many similar entries, than into a smaller, less dense catalog. (Filing a card under "Jones, Edward J." will probably take longer in a file where there are 200 other entries under "Jones," than if there are only 10 others.) Furthermore, as changes in entries occur, a greater number of cards need to be pulled and revised to update the catalog. This makes a large catalog less responsive to change and more expensive to maintain.

Library administrators are becoming conscious of the high cost of maintaining card catalogs. As already noted, libraries that do not close card catalogs will have to interfile cards under two sets of rules. As more entries change, the problems of entry linkage will proliferate. One respondent described the possible long-range implications as follows:

> The resolution in a single integrated card file of the resulting conflicts between existing and new forms of names and subjects will be beyond the capacity of the catalog maintenance function in any research library. Few, if any, research libraries can handle the level of catalog maintenance which already exists.

Many problems besides authority control and record conversion costs were cited. Rather than discuss each in detail, we present only a sampling here in order to stimulate further thought:

1. Should a library close or freeze its catalog by date according to when a titleis cataloged, or by date of imprint?

2. What steps need to be taken to reconcile local shelf lists with changes that the Library of Congress might make in its shelf list?

3. How will a library process sets, analytics, added volumes, and withdrawals, for material already in the collection?

4. How can branch catalogs be coordinated with those in the main library?

5. How will a library display materials published in non-roman alphabets?

6. How will subject headings be accommodated? This is particularly important to libraries that plan derivatives of existing automated circulation systems.

7. How will a library that continues its card catalog keep abreast of Library of Congress changes once LC achieves the capacity to update and change subject headings automatically?

8. How will serial records be controlled? What special problems will the new rules create?

Resolution of most bibliographical problems will fall on the shoulders of technical services staff. Directors may be conscious of decisions. Some may even participate directly in some of the detailed deliberations, but, for most directors, the major concern will likely be how to create an environment hospitable to change, and how to obtain the resources necessary to accomplish an orderly transition.

Most respondents did not express alarm about possible costs. This was surprising, since no one knows what it will cost to either close or not close card catalogs or to adopt or not adopt AACR II. Since the cost implications are almost infinite, it seems reasonable to assume that a library would want to know something about both costs and the amount of money that will be available. Knowing what resources are available is important, since the final choices will be largely determined by the availability of funds. Nevertheless, fewer than twenty libraries singled out "cost" as a particular area of concern. One director was particularly candid about costs, saying that his library would not close its catalogs because there was no prospect of obtaining the necessary funds.

Only one library cited the high cost of planning. It was assumed that this respondent was referring to the high cost of staff time expended by those involved in planning. Two respondents expressed some unease over the fact that costs were such an unknown factor. One library has given considerable thought to cost, because its comments were very specific, citing the high cost of telecommunications, terminals, and COM equipment. Only a couple of respondents cited the high cost of data conversion. Even the majority of directors who indicated an intention to convert records failed to cite cost as a possible constraint.

Many libraries that adopt on-line or COM catalogs must rely on campus computer facilities for support. Therefore, the cooperation of campus computer centers will become crucial. Few respondents reflected much uneasiness about this, but two or three directors recognized their potential vulnerability in this dependence. In two instances, there were questions about the extent of a computing center's commitment. The need to obtain a firm commitment from campus computer centers is important, because the computing power necessary to support an on-line library catalog may be considerable.

The cost of closing catalogs must be balanced against the cost of not closing catalogs. Without any opportunity to analyze the new rules, one can only speculate as to what these costs might be. It has been reported that as many as 49 percent of existing catalog headings could be affected by a changeover to AACR II. Although one can only guess, it is reasonable to speculate that cataloging costs could escalate by as much as 20 to 35 percent, exclusive of increased card catalog maintenance costs, if a library decides not to adopt AACR II.

Are faculty ready for the changes ahead? If one is willing to extrapolate from the responses, there is almost no apprehension about possible adverse faculty reactions. One respondent did caution that the card catalog is a symbol of humanistic scholarship, and he feared that some faculty might feel threatened by its loss. The degree of opposition may depend on the prevailing campus climate, and the effectiveness of the library's educational program. One director observed that his community was, by and large, totally ignorant of what was about to take place. Another reported that the faculty and administrative reactions had so far been mixed. As one read the responses, it was tempting to attribute the absence of faculty reaction to a lack of understanding or awareness of the issues. It appeared that closing card catalogs had not penetrated the consciousness of most campus constituencies.

Several librarians questioned the timing of the Library of Congress' proposed actions. They believe that LC should be asked to defer its decision to adopt AACR II. These views stem from the fear that libraries cannot be prepared by January 1, 1980, because the complexity of the task is just too enormous.

IN SUM

Since becoming involved with the topic of card catalog closure, I have become very conscious of the details involved. ARL libraries are particularly vulnerable to actions of the Library of Congress, and L.C.'s decision to close its card catalog and adopt AACR II raises the age-old question of the Library's role in relation to its national constituencies. This issue is particularly germane, since the timing of the decision is, in part, related to the Library's anticipated occupancy of the Madison Building. LC hopes to create a catalog that symbolically represents a break with past practice.

The intent here is not to criticize, but to focus on a widely-known problem. It appears that the decision by the Library of Congress to adopt AACR II is closely linked with internal considerations. If the new code resulted in improved bibliographic control, there might be some justification for adoption. But, as some professionals close to code development have noted, the new rules may not be better, only different. If the new cataloging code represents no more than a refinement of its predecessor, then the revised code is destined to enjoy a short half-life. It will not be long before another code is developed, one that takes advantage of computer technology. At that time, authority control systems may be available to facilitate conversion of AACR II headings into a newer code. On the other hand, it would not be surprising if another code did not trigger further conversion costs. The ideal solution, based on my understanding of the problem, would be to convince the Library of Congress to defer adoption of AACR II. Failing this, one possible strategy (suggested by a respondent) which might prove useful is to create an ARL study commission to work closely with representatives from the Library of Congress.

Libraries that plan to employ on-line systems and/or COM catalogs may find themselves still dependent upon card catalogs in 1980. Nevertheless, it seems apparent that the days of the card catalog are numbered. It is also apparent that ARL library administrations will have to devote more time and intellectual energy to bibliographic control and catalogs than has been true in recent years.

APPENDIX - B

An addendum to Joseph Rosenthal's Paper

The following document served as the basis of the most recent planning for bibliographic display at the General Library of the University of California at Berkeley. The first three pages are an attempt to articulate both the assumptions which are commonly held among the library staff and some of the decisions which have already been made. The remaining pages are the charges to individuals, teams, and groups which have been working on various assignments or serving as consultants and advisors in particular areas during the past four months. Instead of listing the names of individuals working on particular assignments, the document gives their positions within the General Library in parentheses.

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FUTURE OF THE CATALOGS: The General Library,
University of California at
Berkeley

A Status Report,
And a Basis for Planning, December 1977

The General Library will freeze its present card catalogs at approximately the same time the Library of Congress closes its card catalogs, now scheduled to occur January 1, 1980.

All, or substantially all, of the General Library's data will be either received or input in machine readable form by 1980.

The General Library will be participating in an online cataloging/technical processing system for the forseeable future.

The bibliographic system for the General Library will be developed so as to be consistent and compatible with the Universitywide planning and implementation in this area of library operation.

National bibliographical standards will be followed, in order to facilitate the potential for cooperative and networking activities, and to minimize costs. These standards include:

a) Anglo-American Cataloging Rules as interpreted by the Library of Congress, including Library of Congress established forms of entry, for both print and non-print materials

b) Library of Congress subject headings and classification

c) MARC formats as developed by the Library of Congress

d) Filing rules at such time as a national standard for arrangement of computer-based bibliographic records is developed, and

e) Romanization system.

Various formats will be used for display of data both centrally and locally. No one form -- card, book, microform, on-line display, or listing -- will be used exclusively. The choice of display format will depend on the use intended and the cost of the product, in light of rapidly changing technology. Criteria will be developed to enable the General Library to choose among various modes of display and arrangement of bibliographical data.

For the immediate future, a primary display mode for bibliographic data will be microform. The specific microform format(s) will be developed on the basis of experience with the present Catalog Supplement and Berkeley Serials Union

List. In order to lessen the number of separate displays of bibliographic records, plans should be developed to integrate the display of records for on-order, in-process, and fully-processed library materials.

Records in the machine-based bibliographical file will be displayed under at least the same access points found in the present card catalog system: main entry, name and title added entries, and series and subject added entries. (It should be noted that not all of these access points are provided currently for all types of material.) The microform display will be based on the premise that full bibliographical data for any record will be found in only one place: this might be either in the register listing of a register/index display, or under a basic access point, as in the microfiche display now used at the University of Toronto. Choices here will depend on evaluation of public service utility coupled with cost considerations.

For a number of reasons, including anticipated adoption by the Library of Congress and the General Library of the second edition of the Anglo-American Cataloging Rules and an increased pace of revision of subject headings by the Library of Congress after 1980, many access points in the new bibliographic display will differ from corresponding headings in the existing card catalogs. The General Library's policy will be based on liberal provision of references in the new catalog system; however, alteration of headings and provision of additional references in the existing card catalogs will be on an exceptional basis only.

Planning for the modes of bibliographic display will be on the basis of anticipating a modest extension of on-line access to General Library bibliographic data during the period from now through 1985. By 1980, on-line access should be available at the presently covered units in the Acquisition and Catalog Departments and in Moffitt Library, in the General Reference Service, the Loan Hall, and in at least one branch library location.

Materials received and processed after the beginning of 1980 will be integrated into the new bibliographic system, regardless of date of imprint. This principle is in accord with similar decisions by the Library of Congress, and is intended to lessen the difficulties and costs of processing library materials in the context of two major systems for bibliographic display.

The General Library will expand and improve its program of orientation and assistance to users of bibliographic data.

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The next planning phase for the General Library's bibliographical system will take place during the period January through April 1978. A number of staff members will work either individually or in small groups on particular aspects and problems related to freezing the present card catalog system and changing to new forms of display. For each assignment, a written report will be prepared by the end of the four-month period; these reports should serve as road maps for the implementation period covering the next several years. During

the first four months of 1978, all those engaged in these assignments will meet approximately once each month as a group, together with the University Librarian and the Associate and Assistant University Librarians, who, with the addition of the Head of the Catalog Department and the Head of the Systems Office, will act as a coordinating group for this phase of the planning.

As the written reports covering the various assignments are finished, they will be circulated widely in the General Library for comment, discussion, and suggestions for revision. After an appropriate period for evaluating reaction and making requisite changes in the content of the reports, the actual work necessary to build and implement the new bibliographic system will begin.

The following list details the areas of individual assignments and the people who will be engaged in working on them. Questions and issues to be addressed have been prepared for each of these areas and these brief papers should serve as a point of departure for the intensive planning efforts during January through April. There will be, of course, some inevitable overlapping in the various areas; the monthly meetings and the existence of the coordinating group are intended to lessen the amount of duplicative effort.

"Branch" considerations A (Original Cataloger; Assistant Head of large branch library):

Scope extends to catalogs and files other than Author/Title, Subject, Official, Loan Stack Shelflist, Depository, and CSR catalogs.

What should the configuration for bibliographic display consist of in branch libraries and other specialized public service units of the General Library for the period from now through 1985? When should card catalogs in these units cease to be maintained?

What provision should be made for continued access by call number (shelflist)? Should a catalog card continue to be provided for all branch shelflists? What requirements should be set in order to cease maintenance of branch shelflists in card form?

What opportunities should be provided for local deviation from basic General Library Cataloging policies (i.e., conformity to and compatibility with Anglo-American Cataloging Rules, Library of Congress practice, LC Subject Headings and classification)? What policies should govern the possibility of branch library additions to a bibliographic record such as (1) additional added entries, including variant titles, additional name headings, variant or additional series, (2) additional subject entries, (3) other information in the form of notes? If any such additions are to be permitted by policy, what specific mechanisms should be developed for submission and review of such data?

To what extent should 'temporary' or 'special' locations be reflected in the bibliographic data base? That is, should the bibliographic data base include and display (1) reserve status, (2) 'reference' status, (3) other special locations? If so, what procedures should be adopted for including these data?

What 'authority' or cross-reference information should be provided for branch bibliographic display? (To be coordinated with work of Links and Authorities team)

"Branch" considerations B (Original cataloger, with liaison representatives from 1) Special Collections 2) Music, 3) Undergraduate, and 4) Forestry libraries):

(Should work within general recommendations for branch bibliographic display developed by Branch considerations A team)

What specific policies should be followed for units which now deviate significantly from our basic cataloging policies: Bancroft, Music, Forestry and Forest Products? To what extent should differing practices regarding name and subject headings and classification policy be continued? For each of these units, how should data be submitted to the basic bibliographic file?

For the above units and for Moffitt Undergraduate Library, in what form should holdings data for these units be distributed? Should there be any distribution of bibliographic data other than that contemplated for other units of the General Library? If so, what should be provided? (Any recommendations for additional bibliographic products should be accompanied by specifications as to format, content, access points, frequency, and cost estimates.)

Record formats and display specifications (Head of Catalog Dept., Head of receiving unit in Acquisition Dept., staff member from Cooperative Services Dept.):

Develop in specific detail the configuration of bibliographic display for the General Library system through 1985.

Assume that the 'new' catalog data will be displayed principally in microforms for public use, but that a transition over the period from 1980-1985 will occur, with on-line access to bibliographic data increasing substantially.

What specific configurations should be adopted for the microform display? Register/index? If so, what data elements should be provided in the various indexes? What pattern of indexes should be adopted?

Main and added entries and titles	Main and added entries
Subjects	Titles
Call number	Call number

Name headings (personal and corporate)
Topical subjects
Call number
Series

OR, should microform configurations be based on brief entries under all but one of the various indexes, with one index providing a full bibliographic record?

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Provide a recommendation for a specific frequency pattern for the microform display configuration.

Assume the desirability of combining the microform display configuration for fully cataloged materials with records for on-order and in-process items (the categories of records now represented in the Catalog Supplement). Will this be possible? If so, formulate specific proposals for clear user identificaton of items in various stages of processing. Will the recommended pattern of issuance for this microform display configuration for public use necessitate an additional microform product or set of products for internal (technical service) access? Or should internal access be based on on-line access to records maintained in one or more processing utilities?

What provisions should be made for shelflist access (a) in the immediate future, i.e., during the period when retrospective bibliographic records are for the most part in manual form only, and (b) on a long-term basis, looking toward the time when most or all bibliographic records for General Library collections are in machine-readable form?

Indicate, with regard to specific recommendations in this area, the degree to which specific aspects of the display formats can be changed with comparatively minor cost burdens and disruption of public and technical service functions, and which aspects (once adopted) should be regarded as relatively fixed, in view of these considerations.

Serials (Head of Serials Dept.; Original Cataloger; Head of Serials Database Input Unit):

Develop the configuration of bibliographic and holdings display for serials in the General Library system through 1985, with particular attention to the following points.

To what extent should information regarding serials be reflected in the bibliographic display for the General Library?

-- Should serials be represented at all?

-- If so, under what access points should they be represented? Main entry? Title? Added entries? Subjects?

-- To the extent that serials are represented, should the representation follow the same pattern as monographs if a register/index format is adopted?

-- Should any holdings information be provided in such representation, and if so, under which access points? Beginning date? Complete holdings for inactive titles?

If a separate display is to be provided for serial information (whether or not some information regarding serials is to be included in the display(s) for monograph items), describe the nature of this display with regard to:

-- access points

-- completeness of bibliographic and holdings information under all categories of access points

-- frequency

-- microform and/or hardcopy

Describe the relationships these displays bear to files containing serial data now existing in the General Library:

Berkeley Serials Union List
Author/Title Catalog
Official Shelflist
Central Serial Record entering files:
    Serials Department
    Documents Department
    Branch and other locations
Branch card catalogs

In view of what is known regarding the choice of bibliographic utility for the UC library system by January 15, 1978, recommend steps to be taken regarding the integration or linkage of the Berkeley serials system with a bibliographic utility (BALLOTS or OCLC).

Identify in chronological order, and with estimates of personnel needs and other requirements, the steps to be taken to accomplish the recommendations made above through 1985. Operations should be characterized as 'essential' or 'desirable,' and goals (such as completion date or number of records to be processed on an annual basis) should be stated.

Authority structure and links (Principal cataloger; Original cataloger):

What general and specific policies should be adopted regarding references from variant forms of names and subject headings in and between the old and new systems of bibliographic display? In addressing this point, consider the adoption of AACR 2 by the Library of Congress and the UCB General Library in 1980 and an expected substantial increase in the number of headings to be changed beginning then.

Will the recommended policies be applicable to any form of display for the 'new' catalog, i.e., card, microform, on-line?

What policies should be followed by catalogers regarding the establishment of names and subject headings for the 'new' catalog? In what instances should the 'old' catalog be searched for identical, variant, and conflicting headings? What practices can be adopted to minimize the human effort and cost while assuring adequate bibliographic access to the collection?

For such links as are recommended between the 'old' and 'new' catalogs, what legends should be provided in the bibliographic display? Should the legends explicitly refer users to the 'other' display? Should the legends reflect a time distinction (i.e., "For works cataloged before 1980...")?

What policies should be adopted when records in the 'old' catalog system are modified? Consider modifications based on transfer, change of format (i.e., hardcopy to microform), additions to multiple-volume sets, closing of serial titles, and added copies in different locations.

Non-Roman alphabet records (Head of Special Languages Section in Catalog Dept.):

Present specific recommendations regarding the inclusion, exclusion, and romanization of bibliographic data representing items in non-Roman alphabets acquired and added to the General Library collections in 1980 and after. With reference to particular existing card catalogs, indicate how these policies should affect the maintenance or closing of the card catalogs: specifically, catalogs and shelflist of the East Asiatic Library and the Main Library central catalog system.

In view of anticipated technological and cost developments with regard to representation of various character sets in machine-readable form set forth guidelines for the General Library's long-range policies in this area. What long-range goals should be adopted for separate or integrated files for bibliographic records representing Roman-alphabet and non-Roman alphabet materials?

Public and staff relations (Reference librarian, Undergraduate Library; Assistant to the University Librarian)

List all groups likely to be affected by the changes in bibliographic display to an extent which warrants special attention directed toward informing these groups regarding likely changes, securing feedback and participation in planning, and preparing for effective use of the changed bibliographic system.

- Campus administration
- Senate Library Committee
- Faculty
- Graduate students
- Undergraduate students
- On-site users (in general)
- Initiators of telephone queries
- Other
- General Library staff members:
  - Public service
  - Technical service
  - Other
- Institute libraries
- Other UC libraries
- Stanford

Develop a program, with accompanying chronology, of specific informational and 'public relations' efforts which should be directed to these various groups, including:

-- General level of detail and content

-- Format: e.g., verbal group presentation, slide/tape presentation, brochure, graphic posters/signs, memoranda, Faculty Newsletter

-- Means for obtaining feedback, response, participation

Make recommendations regarding people and units to be assigned to this program; estimate costs.

Participate in all public and staff relations activities connected with the bibliographic system planning during the period January through April 1978.

Physical facilities and equipment (Senior Analyst, Systems Office):

Develop equipment, space, building modification (e.g., wiring) needs for the future system of bibliographic display. Include a transition to on-line access for a major portion of public and staff access to bibliographic data. Re-study, refine, and verify previous projections of use* under the future system; relate these to the needed number of access devices of various types.

What organizational assignments should be made for continuing review of equipment and physical facilities: microform readers, microform reader-printers, on-line terminals, file and display arrangements for microforms (e.g., fiche holders), use justification for additional equipment?

Recommend specific policies for purchase, lease, and maintenance contracts with regard to specific types of equipment.

Develop cost estimates for the period through 1985 for equipment, maintenance of equipment, and building modification.

Liaison with Universitywide (Head, Technical Services; Head, Systems Office):

Maintain liaison and work towards compatibility with Universitywide planning for a UC union catalog system. Communicate budgetary, technological, and networking developments to Universitywide staff members and to appropriate General Library personnel.

Liaison with bibliographic utility (BALLOTS or OCLC) (BALLOTS Coordinator, Catalog Dept.; Analyst/Programmer, Systems Office):

Serve as coordinator(s) between the bibliographic utility and persons and

groups involved in planning future bibliographic operations and display in the General Library. Based on the evolving assumptions regarding record format and bibliographic display, develop cost parameters and specific methods for delivery of various bibliographic products, encompassing the bibliographic utility, any other non-UC agencies (such as microform service bureau), UC Data Processing Center, and specific library units and personnel.

Technical/cost Consultants (Head, Systems Office; Analyst/Programmer, Systems Office):

Advise on feasibility and prepare cost estimates as requested by individuals or teams working on various assignments.

Catalog Use Consultants (Two Heads of branch libraries; Reference Librarian; Head, Cooperative Services):

Advise on issues relating to public use of catalogs as requested by individuals or teams working on various assignments. Review working papers for public use implications.

Coordinating Group (University Librarian; Associate University Librarian for Public Services; Associate University Librarian for Technical Services; Assistant University Librarian for Collection Development and General Reference Services; Head, Catalog Department; Head, Systems Office)

APPENDIX - C

REPORT OF THE TASK FORCE ON ARL MEMBERSHIP

In September of 1976, the Subcommittee to Review Criteria for ARL Membership and the Task Force on Criteria for ARL Membership for Non-University Libraries and Non-Library Agencies issued a joint report recommending "that ARL establish a Task Force on ARL Membership to review and revise membership criteria for all types of research institutions with the specific objective of achieving an appropriate balance between quantitative and qualitative factors applicable to research collections in both academic and non-academic libraries." The report suggested that the Task Force consider six propositions as preliminary guidelines:

"1. The definition of the collection should include all forms of materials of research significance, especially microforms and manuscripts.

"2. Collections should be described by a standardized set of subjects, i.e., major LC catagories, HEGIS fields, or other methods.

"3. The measure applied to all fields of collections should be by titles held and titles added, supplemented by a statement of acquisitions policy.

"4. Unique holdings should be identified by a brief narrative description, as some materials such as pictures, broadsides, etc. are not readily quantifiable.

"5. Quality of service should be measured in terms of national dependence, i.e., ratio of loans to borrowing, including photocopying.

"6. Quality of access should be measured in terms of number of service staff; bibliographic access should be assumed unless there are unique tools that can be identified."

The joint committee report was submitted to ARL in October 1976. The Task Force recommended by the report was appointed in February 1977. It has met in San Diego, Chicago and Nashville, has corresponded frequently, and the Chairman has conversed with the individual members by telephone on several occasions. Mrs. Suzanne Frankie has been very helpful in commenting on the various issues and in transmitting to the Task Force such findings of the ARL Task Force on Statistics as might be useful. Duane Webster has also been helpful and Kendon Stubbs has very generously given much time and effort to devising a mathematically sophisticated ARL library index that would be useful in our considerations.

The introduction to the Joint Report of the preceding Subcommitte and Task Force stated the findings that there was general agreement among the members of ARL on limiting ARL membership to preserve the Association's

integrity and effectiveness, that ARL should continue to be essentially an association of research libraries, and that we should attempt to achieve a balance between quantitative and qualitative factors in ARL membership criteria in spite of the recognized difficulty of developing explicit measurements of quality. The document goes on to say that "there are conflicting views on the validity and practicality of the proposed guidelines for the admission of consortia and non-university libraries" and "there are conflicting views on the practicality of the proposed guidelines for developing measurements of quality."

Regrettably, the difficulties referred to by the Subcommittee and Task Force which led them to recommend a continuing effort by a new Task Force have neither yielded nor diminished since October of 1976. Our efforts to follow the suggestions of the Joint Report have encountered difficulties not fully foreseen by our predecessors. The suggestion that collections be measured by titles held and titles added within the major LC categories, or HEGIS fields, or other subject framework may be judged to a considerable extent by the experience of the Shelflist Measurement Project being conducted at Berkeley. So far, the work there does not seem to be far enough along for our purposes. Problems involving the difficulty of correlating classifications other than LC with LC may be resolved soon, but there remains the difficulty that some libraries include cards for analytics in their shelflist while others do not. Moreover, many libraries contain a large number of volumes that are not represented in shelflists and that should be taken into account. There is the additional fact that even if these difficulties were surmounted, we would have to require all members of ARL to undertake a regular periodic shelflist count, in order to provide us with a standard against which to measure the statistics of applicant libraries.

The suggestion that quality of access should be measured in terms of the number of service staff leaves open the question of defining service. Our former criteria included the number of professional staff FTE's. This, it seems to us, gave an adquate indication of the exent of reference, bibliographic, book selection, and professional managerial services available to serve research in each library. To define service staff more narrowly would involve such problems as trying to separate the reference, book selection, management and other professional duties of such professional staff, for example, as are engaged in the operation of branch libraries.

The suggestion that quality of service might be measured in terms of the ratio of loans to borrowing seems to us to be of questionable merit. Conceivably, the number of items borrowed per year may give some indication of the inadequacy of the collection relative to the demands of the faculty and graduate students. On the other hand, a low number of items borrowed may signify only that relatively little research is done at the institution and that only small demand is made on a not very extensive collection.

The effort to include microforms as a criterion has been complicated by the fact that the equating of microforms with titles or volumes is a perplexing problem. Several methods have been suggested; none of them seems

to be completely satisfactory. It would seem advisable to treat microforms, manuscripts, broadsides, posters, audio-visual materials and other miscellanea separateley, considering them by whatever means they are quantified or described by the applicant libraries as adjunct to the harder statistical criteria.

Since the ARL Task Force on Statistics had been developing a library resources index, we solicited its aid in improving the quantitative criteria for membership. That Task Force magnanimously turned its attention to the problem of selecting and objectively weighting the variables that might be used in an index descriptive of the ARL university libraries. Its report, received early this month, offers the promise of an auxiliary tool that can be used in evaluating applications for membership.

The present Task Force agrees with the statement of the Joint Report of the preceding committees "that the ARL should continue to be essentially an association of research libraries... directly engaged in developing their own collections and serving scholars." It recognizes, however, that there are a considerable number of distinguished research libraries unaffiliated with universities whose collections contribute significantly to the wealth of research resources available in the United States and which have organized themselves into the Independent Research Library Association. The Task Force feels that any IRLA members that apply should be considered for membership in ARL also.

The Task Force on ARL Membership recommends:

(A) That the statistical criteria in use prior to the present interregnum, with the exception of the category, "Number of Ph.D's," and with a slight change in category (9) below, be accepted in judging the eligibility for membership in ARL of university libraries that apply. To qualify for such eligibility, a university library must have maintained for the most recent three-year period an average of over 50 percent of the medians of the first eight of the following categories and 40 percent of the median for catagory (9).

Categories	Percentage of the median
(1) Volumes in the library	50%
(2) Volumes added (gross)	50%
(3) Number of professional staff, FTE	50%
(4) Number of total staff, FTE	50%
(5) Expenditures for library materials and binding	50%
(6) Expenditures for salaries and wages (Exclusive of fringe benefits)	50%

Categories	Percentage of median
(7) Total operating expenditures	50%
(8) Number of current serials including periodicals received regularly	50%
(9) Number of fields in which Ph.D's have been awarded in the past three years	40%

At such time as a meaningful title count may be used as a criterion it should be substituted for volume count. If at any time it becomes feasible to establish an acceptable ratio of all microforms to either titles or volumes, this may be added as a criterion.

(B) That a standing membership committee of the ARL Board of Directors be appointed to consider and recommend action regarding applications for ARL membership. Included in the charge of the committee should be: (1) to weigh, in the case of academic library applicants, the importance of the statistics of their holdings of manuscripts, microforms, and other materials than books and serials; (2) to consider in the case of non-academic libraries the extent, the importance and use of their collections for research and scholarship; and (3) to consider, as an aid in evaluating applications for membership, the statistical approach of the ARL Task Force on Statistics that derives index figures for research libraries through regression analysis.

It is the view of the Task Force that there are very few university libraries not yet members of ARL that would qualify for membership, that the growth of library collections in the near future is not likely to result in the qualification of many additional libraries, since the 50 percent of the median figure required in these categories would represent a constantly upward-moving target; and the interregnum in consideration of applications for membership should be ended.

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Basil Stuart-Stubbs
Frederick H. Wagman (Chairman)

May 9, 1978

APPENDIX - D

ASSOCIATION OF RESEARCH LIBRARIES

OFFICE OF UNIVERSITY LIBRARY MANAGEMENT STUDIES

ACADEMIC LIBRARY PROGRAM:

A Comprehensive Plan for Change

Description

The effects of prolonged inflation, superimposed on an unprecedented period of great growth in user expectations, service programs and collecting activity, has created a difficult and complex fiscal operating environment for all academic libraries. The present prospect of an extended period of fixed or, in some instances, even reduced funding, especially when coupled with firmly established convictions concerning the obligations of libraries to be not only supportive but also active participants in academic activities, makes it imperative for colleges and universities and their libraries to assess collecting objectives, services, and the full range of management procedures that determine resource allocation, staff deployment, and operating practices. Definition of goals, analysis of methods, and agreement on a plan for funding are all essential if objectives and resources are to be brought into balance.

The Office of University Library Management Studies was established to help libraries serve the academic and research community through sound management of the resources available to them. To do this, the Office conducts research into organizational problems, offers information services, and provides training for library personnel. These central activities will be supplemented by the proposed Academic Library Program (ALP) to be sponsored by the Council on Library Resources and administered by the Office of Management Studies of the Association of Research Libraries.

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The ALP is designed to assist in various ways a large number of two- and four-year liberal arts colleges and universities that, on their own initiative, are willing to invest a reasonable amount of staff time and a small amount of money to assess current activities and to formulate plans that will help bring expectations for library service into balance with resources and capabilities. The program will offer support and guidance as needed to libraries in fundamental areas, including library services, collection development and maintenance, and the full range of management issues. Building on accomplishments of recent years, ALP will provide trained consultants, a series of carefully designed guides and manuals, and a program monitoring organization. In brief, ALP is seen as a new and extensive national capacity for change, to be put to use by libraries and their parent institutions as they see fit. ARL and CLR, drawing on funds provided by the Carnegie Corporation of New York and other sources, are committed to the development of ALP, but the initiative for putting the program to work rests with those who are willing to invest in their own future.

The Academic Library Program brings together fully tested activities such as the Management Review and Analysis Program (MRAP) and newer ventures such as the Academic Library Development Program (ALDP) and the Collection Analysis Project (CAP), all of which have been developed by the Office of Management Studies of the Association of Research Libraries with support from the Council on Library Resources and the Andrew W. Mellon Foundation. By consolidating related programs and capitalizing on past efforts, ALP will provide the flexibility required to meet the full range of needs of libraries for guidance as they seek their own solutions to their specific problems and will develop the capacity to assist, over a reasonable period, the large number of libraries that can benefit from such assistance.

Because of the centrality of humanistic and historical subject areas to academic library resources and services and to help individual libraries meet a portion of the costs implicit in assisted self-studies of the kind envisioned, an effort will be made to secure support and assistance for ALP participants from the National Endowment for the Humanities.

In order to provide an expanded and promising means for stimulating institutional change, ALP will identify working librarians who have demonstrated a high level of skill and aptitude and train them for service as consultants, thus increasing the national pool of professional expertise. While this program is designed to be accomplished in a five-year period, the corps of trained individuals will continue to be available beyond that time, and it is assumed that efforts will be made to secure institutional support on a continuing basis. Further, by capitalizing fully on the established abilities of ARL's Office of Management Studies, academic libraries of all kinds will be drawn more closely together. This is a goal of importance in view of the fact that the country at large is seeking more effective means to meet the bibliographic, collection, and service needs of faculty members and students, whatever their affiliation.

Draft: Standards for University Libraries

FORWORD

The following draft of university library standards has been prepared by a joint committee established by the Association of Research Libraries and the Association of College and Research Libraries for this purpose. This committee was appointed in December 1975 with the charge to develop university library standards for submission to ARL and ACRL. The committee has accomplished its task, and the following document, which is the result of its work, has now been submitted. To facilitate ACRL membership review of this document, it is being published in this issue of *College & Research Libraries News*.

The initial membership of the joint committee included Calvin Boyer, director of libraries, University of Mississippi; William Kurth, university librarian, Washington University, St. Louis; Stanley McElderry, director of libraries, University of Chicago; Richard Talbot, director of libraries, University of Massachusetts; David Watkins, university librarian, Brandeis University; Melvin Voigt, university librarian, University of California, San Diego; and Eldred Smith, director of libraries, University of Minnesota (chair). During the two years of the committee's activity, the following changes occurred in its membership: John McDonald, director of libraries at the University of Connecticut replaced Mr. Voigt, Beverly Lynch, director of libraries at the university of Illinois at Chicago Circle, replaced Mr. Kurth.

In the course of its work, the committee has held more than fifteen meetings. An earlier draft of these standards was produced for review and comment by the ARL Board of Directors and the ACRL Standards Committee and University Libraries Section Steering Committee. The joint committee also has held a one-day meeting with representatives of most of the major U.S. higher education organizations and accrediting agencies. Funding for the work of the joint committee has been provided by a J. Morris Jones–Bailey K. Howard ALA Goal Award and by a grant from the Council on Library Resources.

Perhaps the single most critical issue confronted by the committee in the course of its deliberations was whether the standards should (or could) be quantitative rather than qualitative. After considerable investigation and exploration of a variety of quantitative approaches, including specific performance measures, the committee concluded that no quantitative standards were presently applicable to the total number and range of institutions defined as university libraries.

It also concluded, however, that certain quantitative approaches could be applied to carefully selected subgroupings of these institutions. The appendix to the standards, which was also developed by the committee, demonstrates the difficulty in applying quantitative measures to all university libraries but also indicates certain quantitative analyses that can be utilized in comparing similar institutions within this total group. It is the committee's judgment that this appendix should be issued, as an appendix, with the standards.

These standards are currently under review by the ACRL Standards Committee, the ACRL University Libraries Section Steering Committee, and the ARL Board of Directors. Discussion sessions are being scheduled for the ACRL Chicago conference in June 1978, which will provide ACRL members with an opportunity to discuss these standards with the joint committee. ARL membership discussion of these standards will take place at its fall membership meeting.—*Eldred Smith.*

DRAFT: STANDARDS FOR UNIVERSITY LIBRARIES

Prepared by a joint committee of the Association of Research Libraries and the Association of College and Research Libraries, a division of the American Library Association.

Introduction

These standards have been prepared to assist faculty, university administrators, librarians, accrediting agencies, and others in the evaluation and improvement of university library services and resources. These statements are intended to apply only to those institutions of higher education which have been characterized by the Carnegie Commission on Higher Education as "doctoral granting institutions." The criteria which distinguish these institutions are: the awarding of doctoral degrees and the receipt of federal financial support.[1] All of these institutions emphasize graduate study, professional education, and research. Despite these basic similarities, university libraries are also characterized by a high degree of individuality, particularly with respect to policies, programs, responsibilities, and traditions. Hence, these standards are not intended to establish normative prescriptions for uniform application. Rather, they are meant to provide a general framework within which informed judgment can be applied to individual circumstances.

The fundamental assumption of these standards is that the library has a central and critical importance in a university. This importance has been recognized repeatedly by analysts of higher education. In his 1966 report to the American Council on Education, Allan M. Cartter, for example, stated:

"The library is the heart of the university; no other single non-human factor is as closely related to the quality of graduate education. A few universities with poor library resources have achieved considerable strength in several departments, in some cases because laboratory facilities may be more important in a particular field than the library, and in other cases because the universities are located close to other great library collections such as the Library of Congress and the New York Public Library. But institutions that are strong in all areas invariably have major national research libraries."[2]

As with all institutions, universities and their libraries have experienced considerable change over time. Further changes are taking place now,

and others clearly lie ahead. Particularly noteworthy is the increasing sense of interdependence and commitment to coordination among universities generally. With regard to university libraries, the following developments are particularly important: the growth of interlibrary cooperation, especially resource sharing; the strengthening and expansion of service programs, such as bibliographic instruction; the increasing importance of recorded information in nonprint formats; the application of automated systems to library operations and the growth of machine-readable data bases; the closer interaction between librarians and faculty and the improved status of librarians within the university; increased stress on the effectiveness and efficiency of operations. A recognition of such trends and their importance is fundamental to these standards.

Recognizing the increasing interdependence of universities in developing and maintaining scholarly resources, these standards are intended to provide guidance in identifying that level of library self-sufficiency which is essential to the health and vigor of a university and its academic programs. The general assumption is that the primary obligation of a university library is to meet the instructional and research needs of the students and faculty at that university. However, no university library can acquire all of the recorded information that its clientele may find useful. An attempt is made therefore, to recognize the mechanisms being developed to promote cooperative access to scholarly information, to identify the current limitations of interdependence, and to enumerate the factors which are essential in maintaining an environment in which instruction and research can flourish.

Care has been taken to limit the standards to succinct statements focusing on the elements judged to be most critical in determining the adequacy of a university library. An explication of the principles identified in the standards is provided in the form of commentary.

SECTION A: SERVICES

Standard A.1

In order to support the instructional, research, and public service programs of the university, the services offered by a university library shall be such as to facilitate use of recorded information in all formats by all of the library's clientele.

Commentary on Standard A.1

In developing and implementing its program of service, a university library should give priority to the needs of the students, faculty, and other academic staff of the university, who may be said to constitute the library's "primary clientele." While it may also have obligations or commitments to other clienteles or constituencies, the library should recognize that these are secondary.

A university library should provide the following services: reference and information services which are available at adequately identified and designated points during established service hours; specialized and in-depth assistance to individuals in the use of the library's resources; specially prepared bibliographical guides and subject or topical research aids; lectures and courses in bibliographical research; services which will facilitate access to nonprint media and machine-readable data bases; and services which will facilitate access to recorded information in other library collections.

These services should be designed to meet effectively the whole range of different informational and bibliographical needs that arise in the various academic areas and in all other parts of the university.

While universities should place great emphasis on meeting the intensive library needs of graduate students and faculty, they should be careful not to neglect the needs of undergraduate students.

Finally, university libraries should recognize that, to one degree or another, they share a responsibility with all research libraries to support higher education in general and each other in particular through cooperative efforts.

Standard A.2

In order to ensure maximum access to its collections and their contents, a university library shall maintain records of its collections which are complete, consistent, and in conformity with national bibliographical standards and requirements.

Commentary on Standard A.2

The extent of bibliographical coverage that must be provided in a particular library will depend on many factors, such as whether or not the library has open or closed access stacks, the extent and nature of the library's specialized collections, the history and traditions of the library and of the university, and the nature of specific cooperative arrangements that the library may have entered into with other libraries and library consortia.

To ensure effective access to its collections as well as to increase its operational efficiency, a university library's bibliographic records should conform to recognized standards of cataloging and classification, and its bibliographic apparatus should be internally consistent. Its bibliographic records should be adjusted in conjunction with periodic inventories of the collections. Every multi-unit university library should have a union catalog of its cataloged holdings.

Standard A.3

Within the limits of the university's particular responsibilities and priorities, a university library shall provide maximum access to its collections for all of its clientele.

Commentary on Standard A.3

Various factors are involved in providing access to a library's collections, such as circulation policies and procedures, service hours, security arrangements, and actual operating efficiency. While practices vary significantly from library to library, certain principles should be followed in each library. Most items in the library collections should be readily available both for consultation in the library and for circulation to authorized clientele. Access to and circulation of rare, fragile, and high-demand materials should be appropriately controlled and restricted. To ensure

maximum availability of the collections to those authorized to use them, terms of loan should be carefully set and should generally be similar for all user categories.

Adequate precautions should be taken to control loss of or damage to the library's collections. The prompt return in good condition of all circulated materials should be effectively enforced for all borrowers.

Circulation procedures and stack maintenance operations in a university library should be effective and efficient. There should be a regular and continuing program of shelf reading. Library service hours should be responsive to high- and low-use periods, to the number of branch, departmental, and other special libraries in the system as well as to the availability of alternative study space.

Section B: Collections

Standard B.1

A university library's collections shall be of sufficient size and scope to support the university's total instructional needs and to facilitate the university's research programs.

Commentary on Standard B.1

A university library should provide all of the resources that are necessary for direct support of the university's full instructional programs at both the undergraduate and the graduate levels. If these resources are not readily available in the library, the instructional programs cannot be carried out successfully. These resources include required and assigned readings, reference and bibliographical materials, basic journals and serials, as well as any other library materials that undergraduate or graduate students are expected to be able to consult readily in their courses of study.

Weak collections can hamper research. The accumulation and preservation of substantial collections and the implementation of comprehensive acquisition programs must be recognized as providing a resource whose presence within a university is essential to the conditions under which knowledge is effectively increased and transmitted. It is clear that no university library can be expected to possess in its collections all of the recorded information which faculty or doctoral students may need to consult as they pursue their research. Nevertheless, it is essential that collections be of such size, scope, and quality that they promote rather than restrict research. While every library should take care to develop collections whose areas of concentration reflect and support the academic priorities and strengths within the university, interlibrary arrangements, which have long been established for the mutual support of exceptional research needs, must continue to be relied upon to supplement even the most comprehensive research collections.

The continued rapid growth of scholarly literature and the costs of providing access to this literature for those in the university community have necessitated formal and informal arrangements among libraries to ensure maximum access to this literature. Common methods of sharing resources and improving access have been loans between libraries, provision of visiting privileges for scholars, agreements on the acquisitions of materials, and sharing of bibliographic information.

While interlibrary cooperation, as presently practiced, may not promise large cost savings in the immediate future, significant improved methods of supplementing local resources are in the active planning stages. University libraries must participate in the development of these new access mechanisms to ensure that local, regional, national, and international interests are effectively served.

Attempts have been made to identify precise quantitative measures of adequate collection size and growth rates for a university library. No such formula has yet been developed which can be generally applied. At present, such formulas as exist can only yield approximations which indicate a general level of need. If they are applied arbitrarily and mechanically, they can distort the realities of a given situation. Nevertheless, quantitative measures are increasingly important in guiding the qualitative judgment that must ultimately be applied to university libraries and their collections. One promising technique is the use of regression analysis to facilitate the comparison of similar libraries to one another;[3] another of some general applicability is the "index of quality" developed by the American Council on Education for relating library collection size to graduate program quality.[4]

Standard B.2

A university library's collections shall contain all of the varied forms of recorded information.

Commentary on Standard B.2

The university library has traditionally been recognized as the repository within the university for the printed information needed to support the university's instructional and research programs. As recorded information becomes increasingly available in a variety of nonprint formats, such as films, sound recordings, and video tapes, it is appropriate that this material, except where needed exclusively for classroom use, also be acquired, organized, and made available through the university library.[5]

Standard B.3

A university library's collections shall be developed systematically and consistently within the terms of explicit and detailed policies.

Commentary on Standard B.3

Given the great breadth of university library collections and the wide variations in depth of collections among subjects held, it is essential that there be a collections development policy to guide the selection and acquisition of materials.

By establishing such a policy, librarians seek to ensure that the library's collections are planned and developed in relation to the university's academic, research, and service goals and priorities and within the limits of resources available.

Working in close consultation with faculty and administration, librarians, particularly subject specialists, should assume the responsibility for drafting and implementing this policy.

Recognizing the inherent difficulties in collection development, it is imperative that the library have full and continuous access to information about all developments, actual and planned, in the academic, research, and service programs of

the university and its components which affect the library.

Once codified, the library's collection development policy should be made known to and endorsed by the university faculty and administration. To ensure that this policy reflects changes within the university, the policy should be regularly and carefully reviewed.

SECTION C: PERSONNEL

Standard C.1

A university library shall have a sufficient number and variety of personnel to develop, organize, and maintain such collections and to provide such reference and information services as will meet the university's needs.

Commentary on Standard C.1

The size of a university library's staff is determined by many factors, including the number of physically separate library units, the number of service points requiring staff, the number of service hours provided, the number and special characteristics of items processed annually, the nature and quality of the processing to which they are subjected, the size of the collections, and the rate of circulation of the collections. Interinstitutional cooperative arrangements may also affect staff size. As such factors vary widely from one institution to another, no single model or formula can be provided for developing an optimum staff size.

A university library should have on its staff a variety of personnel: professional, clerical, and student-assistant staff. The librarians should perform the core academic and professional functions of the library: collection development, reference and information services, and substantive activities related to the bibliographic control of materials. All categories of personnel should have appropriate education and experience, including, when necessary, graduate or professional degrees in their particular specialties. The recognized terminal degree for librarians is the master's degree from an American Library Association accredited library school program, although additional graduate degrees may sometimes be desirable.

The deployment of personnel within a specific university library is related to the range of operations and services provided by that library and to its total workload requirements.

Standard C.2

Personnel practices within a university library shall be based on sound, contemporary administrative practice and shall be consistent with personnel practices within the university as well as the goals and purposes of the library.

Commentary on Standard C.2

The terms and conditions of employment of the several categories of staff in a university library should be consonant with the established terms and conditions of employment of staff in related categories elsewhere within the university. Terms and conditions of employment for librarians, for example, should parallel those of the rest of the university's academic staff, just as terms and conditions of employment for the library's clerical and student staff should parallel those of similar employees within the university as a whole. More specific guidance on these matters is provided in the following documents: "Statement on Faculty Status of College and University Librarians"[6] and "Library Education and Personnel Utilization."[7]

A comprehensive university library personnel management program should address recruitment, appointment, promotion, tenure, dismissal, appeal, definition of position responsibilities, classification and pay plans, orientation and training programs, review of employee performance, and counseling.

SECTION D: FACILITIES

Standard D.1

A university library shall have facilities which meet the present and anticipated future requirements of the university and its programs.

Commentary on Standard D.1

A university library's buildings should be of sufficient size and quality to house the collections and to provide sufficient space for their use by students, faculty, and other clientele. There should also be adequate space for the library operations necessary for the provision of its services. Adequacy of facilities cannot be determined simply on the basis of present requirements. The size and composition of the university's enrollment, the nature of its instructional and research programs, the form and publication rate of library materials strongly influence library requirements, and it is necessary that these requirements be subject to continuous evaluation and planning.

A university library should be attractive, inviting, and carefully designed to promote operational efficiency and effectiveness of use. Specific factors relevant here include general environmental features that affect clientele, staff, and collections (light, ventilation, temperature and humidity control, vertical and horizontal transportation, safety features, etc.), layout of the stacks, number and variety of reader stations, relationship between stacks and reader stations, relationship among service points, effective flow of materials, and adequacy of space for staff and operations.

The fundamental consideration in designing a library building should be its function. Since the nature of collections, services, operations, and the needs of a library's clientele can change significantly over time, present and future flexibility is an important element in library design. Although the architectural style and traditions of a university may dictate certain design features for a library building, such factors should not be allowed to compromise basic functional considerations.[8]

Standard D.2

Libraries shall be so located that the university community will have convenient access to them.

Commentary on Standard D.2

The requirements of interdisciplinary studies and research, recognition of the needs of undergraduate students, the urgency of achieving operating economies—these and other factors have revived interest in centralizing physically dispersed library units in order to improve access to resources and avoid costly duplication in the development and maintenance of collections.

There are circumstances, however, such as campus geography, intensity of use, and size of collections which may continue to justify the maintenance of multiple library units. Remote storage facilities, undesirable as they may be, may also be established in attempting to deal with space inadequacies. Where the pattern of decentralization persists in any form, it is important that libraries be located so as to minimize inconvenience to all library users.[9]

Section E: Administration and Governance

Standard E.1

The place of the university library within the administrative and governance structure of the university shall be clearly identified, and the responsibilities and authority of the library administration and its chief administrative officer shall be defined.

Commentary on Standard E.1

If there is ambiguity within the university community as to the particular place occupied by the library within the administrative and governance structure of the university, and if the authority and responsibilities of the library's chief administrative officer are not clearly identified, misunderstanding, conflict, and confusion can sometimes result to the detriment of both the university and its library. Because it is closely related to instruction and research, the university library should be formally recognized as one of the major academic units within the university, and its chief administrative officer should participate regularly and directly in university-wide academic planning and decision making. For similar reasons, this person should report directly to the chief academic officer of the university.

The long-recognized need in institutions of higher education to involve faculty in library matters has led to the institutionalization of the advisory library committee. Because of the fundamental importance of the library to instruction and research and the consequent need for close, continuing interaction between the faculty and the library, the existence of the library committee is valuable. The committee should be advisory, and its responsibilities should be clearly delineated.

Standard E.2

The university library's own administrative and governance structure shall be clearly specified and shall be consonant with the governance structure of the university as well as with the particular needs and requirements of the library.

Commentary on Standard E.2

In order to facilitate effective organizational activity and decision making, it is essential that the administrative and governance structure of the university library itself be clearly specified. This will involve identifying the roles and responsibilities of all categories of library personnel in the governance of the library. It is essential that library governance reflect the principles and practice followed elsewhere within the university, although they should be modified as necessary to embody those conditions and issues peculiar to an academic library.

Standard E.3

There shall be a close administrative relationship among all libraries within the university to the end that library users may make full and effective use of library resources and services.

Commentary on Standard E.3

No single pattern of library administration will serve all universities equally well, but whatever pattern an institution chooses should have as its principal purpose the equitable distribution of library resources and services. The needs of scholars differ from discipline to discipline and often the needs of students differ from those of faculty. These competing interests cannot always be reconciled, but one important task of library administration is to achieve as much balance as possible in the provision of services to all groups.

However administrative relationships among library units within a university are determined, it is essential that adequate coordinating mechanisms be established and enforced to ensure that service policies are in reasonable harmony, that costs related to duplication are controlled, and that access to all library collections is maximized. Unless other information services such as audiovisual centers, computer centers, on-line searching services, as well as libraries, are already centrally administered, the coordinating mechanism should also act to relate the activities of these organizations to one another.

Standard E.4

A university library's major policies and procedures shall be clearly defined and regularly reviewed.

Commentary on Standard E.4

In order to ensure that it is effective internally and understood externally, a university library should clearly define its major policies and procedures and record them in written form. The written statements of policy should be readily available to all members of the library staff, and policies which have external relevance (such as the library's collection development policy or circulation policy) should be accessible to the library's clientele and to others who may need or desire to consult them. These policies, as well as the practices that implement them, should be regularly reviewed to ensure that they continue to be appropriate.

Section F: Finance

Standard F.1

A university library shall receive sufficient funding to enable it to fulfill its obligations and responsibilities as identified in the preceding standards.

Commentary on Standard F.1

The total budgetary needs of a university library can be determined only in relation to its responsibilities. Many attempts have been made to develop formulas or other "objective" measures for determining the budgetary requirements of a university library. These measures range from matching funding with student enrollment to defining a minimum percentage of the total

university operating budget which should be devoted to the library. Such "objective" approaches to budget determination do not always take cognizance of the range and complexity of demands which any university library must meet, as well as the significantly different library needs of different universities.

These conditions also make it impossible to identify a viable model that can be applied to all university libraries for allocating their budgets by major category (salaries and wages, acquisitions, binding, miscellaneous supplies, and other expense). Allocation ultimately depends on local requirements and priorities. For example, if a university library is expected to operate a substantial number of discrete units with parallel and duplicative activities, its expenditures for salaries and wages will be higher than if this were not the case.

Under any circumstances, it is essential that a university library be provided with sufficient funding to enable it to develop appropriate collections, provide appropriate services, carry out necessary operations, and satisfy identified expectations and requirements. If funding is less than is necessary to fulfill these obligations, the library will be unable to meet university needs.

A university library should be expected to operate on a sound financial basis. To do this, the library and its administration must be able to identify and support its fiscal request effectively and to report adequately on expenditure of funds.

Standard F.2

The university library budget shall be a distinct part of the university's budget, and it shall be developed and managed by the chief administrative officer of the university library, who shall also participate in total university budgetary planning.

Commentary on Standard F.2

The authority to prepare, submit, defend, and administer the university library budget should be delegated clearly and explicitly to the chief administrative officer of the university library. He or she should have full responsibility for managing this budget as well as the authority necessary to maximize the use of the library's total resources. He or she should have the same degree of latitude and responsibility that is exercised by other major administrative officers within the university. The library should be responsible for preparing adequate and regular reports on expenditures throughout the year. These reports should conform to the university's requirements and, where necessary, to its standardized procedures and practices.

Because of the importance of the library within the university and the need that it respond effectively to changing demands, priorities, and academic programs, it is essential that the library budget be developed in relationship to and with full cognizance of the total university budget-planning process, and that the library's chief administrative officer be directly and significantly involved in this process.

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1. Carnegie Commission on Higher Education, *A Classification of Institutions of Higher Education* (Berkeley, Calif.: The Commission, 1973), p.1-2, 9-22. This publication identifies 173 "doctoral granting institutions."
2. Allan M. Cartter, *An Assessment of Quality in Graduate Education* (Washington, D.C.: American Council on Education, 1966), p.114.
3. William J. Baumol and Matityahu Marcus, *Economics of Academic Libraries* (Washington, D.C.: American Council on Education, 1973).
4. *An Assessment of Quality in Graduate Education*, p.114.
5. The best recent discussion of the importance of nonprint media for higher education is Carnegie Commission on Higher Education, *The Fourth Revolution: Instructional Technology in Higher Education* (New York: McGraw-Hill, 1972).
6. In *Faculty Status for Academic Librarians: A History and Policy Statement* (Chicago: American Library Assn., 1975), p.35-38.
7. "Library Education and Personnel Utilization" (Chicago: American Library Assn., 1976).
8. Considerable valuable information is available in several publications, the best of which remains Keyes D. Metcalf, *Planning Academic and Research Library Buildings* (New York: McGraw-Hill, 1965).
9. This issue has been the subject of considerable analysis. See, particularly Ralph E. Ellsworth, *The Economics of Book Storage in Academic Libraries* (Metuchen, N.J.: The Association of Research Libraries and the Scarecrow Press, 1969). Also useful is Jeffrey A. Raffel and Robert Shishko, *Systematic Analysis of University Libraries* (Cambridge, Mass.: MIT Press, 1969).

Appendix

Quantitative Analytical Techniques for University Libraries

The university libraries[1] to which quantitative measures might be applied are so complex so diverse in the programs they support, and so different from each other that it is extremely difficult, if not impossible, to devise a common statistical measure which could be applied to all of them. This problem is further complicated by the character and inadequacy of the currently available data. Herman Fussler, for example, observes that "libraries, like universities, tend to have very inadequate analytical data on their own operations and performance. Such data, especially as they relate to costs and system responses to user needs, are critically important in any effort to improve a library's efficiency and responsiveness."[2] Fritz Machlup, in the course of his recent efforts to measure the holdings and acquisitions of libraries on a broad scale, has complained about the lack of adequate date.[3] Other observers have challenged the utility of present library data collection.[4] They focus on perceived failures to measure performance or effectiveness. Nevertheless, academic institutions do compete for faculty and students, and one of the elements in this competition is the adequacy of library services and collections. Comparative judgments about academic libraries are made, and these comparisons can be aided by quantitative measures.

Unfortunately, much of the data which are needed to actually make interinstitutional comparisons is not easily available, although some useful data can be obtained from ARL statistics. The LIBGIS and HEGIS surveys also supply data, but these are usually too old for current needs or in a form which is difficult to use. Consequently, the analyst is compelled to rely on what is available: ARL statistics, authorities who have written on the subject, and such limited surveys as he or she can make. All of these methods have varying degrees of utility, but with the possible exception of the ARL data, none provide the raw data on which empirically derived measures can be based. Certain "common" practices can be discerned, and the advice of authorities can be weighed, but these, however valuable, do not constitute quantitative measures in an empirically derivable, logically justifiable sense. To have reliable quantitative measures, the categories to be measured must be defined, and a mechanism for gathering the necessary data must be developed.

In the absence of either of these necessary conditions, it is difficult to do more than perform what analyses can be performed on ARL data. Briefly, these fall into three categories: (a) insights obtained by simple inspection of the data; (b) the construction of ratios which reduce the quantity of data to be comprehended and facilitate comparison; and (c) regression analysis which performs roughly the same function from the analyst's point of view as the construction of ratios but also requires an effort on the part of the analyst to group like institutions together and gives an analyst some indication of how well this has been accomplished (coefficient of determination).

Simple inspection of ARL data, aided by rankings, ranges, averages, and medians, does provide useful insights for the experienced library manager who can mentally discount obvious discrepancies and differences between institutions and can restrict comparisons to a homogeneous group. However, to read, for example, that in 1976–77 the number of volumes in ARL libraries ranged between Harvard's 9,547,576 and McMaster's 906,741, that the average library held 2,127,047, and the median was 1,653,000 may give the reader a sense of perspective, which is valuable, but it is of limited use in drawing comparisons between rather different institutions.

A reduction of data can be achieved by the use of ratios or percentages, as is shown in the example of ratio analysis below. Some of those which can be generated from existing data include:

1. The ratio of professional to nonprofessional staff
2. Expenditure for library materials as a percent of total library operating expenditure
3. Ratio of salary expenditures to library material expenditures

This kind of data reduction aids analysis by making the data more comprehensible. For example, among ARL libraries in 1976–77, the ratio of professional to nonprofessional staff ranged from 1.08 to 0.24; the average was 0.51 and the median 0.49. The overwhelming majority of libraries tended toward a pattern of one professional to two nonprofessionals. Among ARL libraries in 1976–77, expenditures for library materials as a percent of total library expenditures ranged from 19.14 percent for Toronto to 50.61 percent for Houston. The average was 31.46 percent and the median 30.09 percent. The vast majority of ARL libraries tended to spend 30 percent of their budgets on acquisitions. The obverse of materials expenditure for libraries is salary expenditure. Expressed as a ratio of salary to materials it ranged from 3.6 in the case of Toronto, to 0.8 in the case of Houston, with the median 1.9 and the average 1.93.

From ratios such as these, a deeper insight into library operations can be obtained, but it would be rash to conclude that all libraries should spend 30 percent of their budgets for books and 60 percent for salaries or that the ratio of professional to nonprofessional should always be 1:2. Local conditions dictate differing policies. A library with many branches may require a higher ratio of professionals to nonprofessionals. Conversely, differing operating conditions, different types of staffing may dictate different ratios. An example of a more extended kind of ratio analysis is that of Allan Cartter's Library Resources Index, which is described in a following section. Yet, even this kind of ratio should be viewed cautiously. At best, ratio analysis can serve only as a background against which local conditions may be evaluated.

Regression analysis also provides a form of data reduction, but it compels the analyst to attempt to group like institutions together. Baumol and Marcus provide a guide to its use in library data analysis.[6] The concluding section of this appendix gives an example of its application. But the same caveats about drawing inferences that apply to ratio analysis apply to regression analysis.

In addition to these, there is a growing literature on performance evaluation of libraries which is expressed in various ways. F. W. Lancaster summarizes some of the possible approaches:

"1. The ability of the library to deliver a particular item when it is needed.

"2. The ability of the catalog and the shelf arrangement to disclose the holdings of particular items or of materials on particular subjects.

"3. The ability of reference staff to answer questions completely and accurately.

"4. The speed with which a particular item can be located when needed.

"5. The speed with which a reference inquiry can be answered or a literature search conducted and the results presented to the library user.

"6. The amount of effort that the user must himself expend in exploiting the services of the library (including factors of physical accessibility of the library and its collections, the size and quality of the library staff, and the way in which the collections are cataloged, indexed, shelved and signposted."[7]

Performance measures are, however, still in the early stages of their development. They may eventually prove to be extremely important to libraries, but they are likely to be most useful in making intrainstitutional rather than interinstitutional decisions. In sum, there are no simple solutions, no ready panaceas, no easily available substitutes for intelligent analysis of available data.

Example of Ratio Analysis

Table 1 below demonstrates the application of ratio analysis to library materials expenditures as a percentage of total library operating expenditures. It is based on the latest (1976–77) ARL data. For the sake of brevity and because this is simply used as an example, only twenty of the

total applicable ninety-three institutions have been included.

TABLE 1
LIBRARY MATERIALS EXPENDITURES AS A PERCENTAGE OF TOTAL LIBRARY OPERATING EXPENDITURES (VALUE) FOR TWENTY UNIVERSITY LIBRARIES, 1976–77

Rank Order Number	Institution Number	Institution Name	Value
1	31	Houston	50.61
2	3	Arizona	44.63
3	82	Texas A & M	44.05
4	87	VPI & SU	42.84
5	81	Texas	42.69
6	25	Georgia	42.21
7	35	Iowa	42.15
8	71	South Carolina	42.08
9	68	Rice	41.67
10	42	Louisiana State	40.19
11	20	Connecticut	40.04
12	60	Oklahoma State	39.51
13	53	Nebraska	39.30
14	80	Tennessee	39.22
15	52	Missouri	38.93
16	4	Arizona State	38.62
17	22	Dartmouth	38.30
18	24	Emory	38.23
19	1	Alabama	38.08
20	57	Notre Dame	37.87

The Library Resources Index

The Library Resources Index is a specialized index devised by Allan M. Cartter and published in his *An Assessment of Quality in Graduate Education*.[7] It is an average of three indexes and is computed in the following way. First, the pool of institutions to be compared is determined. (In the example, shown as table 2, this pool is all ARL libraries and the data are for 1976–77). Second, three variables are isolated: (a) total volumes; (b) volumes added; and (c) periodicals received. A separate index is formed for each variable by finding the average for each variable and dividing the average value into the value for each institution.

For example, assume that the average number of periodicals held in ARL libraries is 15,000, and three institutions have totals respectively of 60,000, 15,000, and 7,500. Dividing the average, 15,000, into each of these figures yields index values of 4, 1, and .5. Similarly, values are found for each institution for the other two variables: volumes added and total volumes. Then the three index values for each institution are summed, divided by three, and sorted into descending order. For example, refer to institution number 8 in table 2. It is Michigan. It has index values of 2.31, 1.81, and 1.92. The sum of these is 6.04. Dividing this by 3 yields 2.01, the overall library resources index.

Mr. Cartter's index was based on 1963–64 data. His general conclusion at that time was: "Those libraries which fall below .5 are probably too weak to support quality graduate programs in a wide range of fields, although they may be adequate for an institution that specializes in technology or in advanced work in a very limited number of areas."[8]

Table 2 demonstrates an application of the Library Resources Index to twenty ARL libraries, using 1976–77 ARL data.

TABLE 2
THE LIBRARY RESOURCES INDEX APPLIED
TO TWENTY ARL LIBRARIES, 1976–77

Rank Order Overall Index	Institution Name	Total Volume Index	Volumes Added Index	Serials Index	Overall Library Resources Index
1	Harvard	4.49	2.25	3.89	3.54
2	Illinois	2.74	1.95	3.43	2.71
3	Yale	3.24	2.40	2.44	2.69
4	Calif., Berkeley	2.31	1.75	3.90	2.65
5	Texas	1.91	2.87	2.41	2.39
6	Indiana	2.07	2.39	1.71	2.05
7	Columbia	2.22	1.57	2.31	2.03
8	Michigan	2.31	1.81	1.92	2.02
9	Stanford	2.05	1.67	2.13	1.95
10	Toronto	1.87	2.15	1.66	1.90
11	Calif., Los Angeles	1.84	1.44	2.26	1.84
12	Washington	1.52	2.16	1.64	1.77
13	Cornell	1.87	1.33	2.08	1.76
14	Chicago	1.83	1.60	1.76	1.73
15	Wisconsin	1.52	1.30	1.92	1.58
16	Ohio State	1.53	1.50	1.15	1.39
17	Minnesota	1.58	0.93	1.48	1.33
18	Duke	1.35	1.28	1.33	1.32
19	Princeton	1.37	1.18	1.25	1.27
20	Pennsylvania	1.31	1.08	1.10	1.16

Regression Analysis Tables Using ARL Data, 1975–76

In analyzing data from ARL libraries, the strongest statistical relationships are found to exist when these libraries are categorized in some way. Therefore, by way of example, ARL libraries may be grouped in four different ways:

1. All ARL academic libraries.
2. All private ARL academic libraries in the U.S.
3. All public ARL academic libraries in the U.S.
4. All Canadian ARL academic libraries

Further, for each group additional tables may be developed that predict the values of certain different (dependent) variables based upon the value of other (independent) variables. Six variables, for example, which can be examined are:

1. Professional staff
2. Total staff
3. Gross volumes added
4. Expenditures for library materials
5. Total library expenditures
6. Current periodicals held

For each library in each of the four groups noted above, the following predictions then can be made:

1. Number of professional staff based on number of volumes held
2. Number of total staff based on number of volumes held
3. Number of gross volumes added based on volumes held
4. Expenditures for library materials based on gross volumes added and volumes held
5. Total expenditures based on volumes held, gross volumes added, and total staff
6. Number of current serials based on number of volumes held

Thus, for each table there can be plotted a display of variables, together with observations for each institution, and which include for each dependent variable its actual value, its estimated value, and the residual, which is the difference between the actual and the estimated value. For example, assume we have the display shown below as table 3, which predicts the number of professional staff a library is expected to have based upon the number of volumes held.

TABLE 3
EXAMPLE OF REGRESSION ANALYSIS APPLIED
TO SIZE OF PROFESSIONAL STAFF (Y)

Institution	Y Value	Y Estimate	Residual	Display		
Library A	37	39	−2	X		
Library B	52	48	+4		X	
Library C	63	55	+8			X
Library D	60	72	−12	X		
				least squares line normalized		

The first column identifies each institution; the second shows the actual value for each variable; the third shows the expected value based on the regression equation computation which has been done; the fourth is the difference between columns two and three; and the fifth is a plot of the data.

Looking at Library A, we see that it has thirty-seven professional staff, but based on the other libraries in its comparison class, it would be expected to have thirty-nine. The actual value is two fewer than expected, so its position on the graph is plotted to the left of the least squares line. (See any standard textbook on statistics for detailed explanation of this technique.) Libraries B and C have more professionals than would be expected, so they are plotted to the right of the line. Consequently, by inspection, the library manager can note any obvious anomalies between his or her institution and others.

References for Appendix

1. Doctoral granting institutions in Carnegie Commission on Higher Education, *A Classification of Institutions of Higher Education* (Berkeley, Calif.: The Commission, 1973), p.1–2, 9–22.
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6. F.W. Lancaster, *The Measurement and Evaluation of Library Services* (Washington, D.C.: Information Resources, 1977), p.323.
7. Allan M. Cartter, *An Assessment of Quality in Graduate Education* (Washington, D.C.: American Council on Education, 1966).
8. *Ibid.*, p.114.

APPENDIX - F

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CONSER Project	Ryburn Ross, Cornell
Joint Committee on Union List of Serials	William Budington
Joint Statistics Coordinating Committee (ALA)	Donald Koepp
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Louis Martin, Harvard University
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APPENDIX - H

MEMBERSHIP LIST
May 1978

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P.O. Box S
University, Alabama 35486
James F. Wyatt, Dean of Libraries
(202) 348-5298

University of Alberta Library
Edmonton, Alberta, Canada
Bruce Peel, Director
(403) 432-3790

University of Arizona Library
Tucson, Arizona 85721
W. David Laird, Librarian
(602) 884-2101

Arizona State University Library
Tempe, Arizona 85281
Donald Koepp, Librarian
(602) 965-3415

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Boston, Massachusetts 02117
Philip J. McNiff, Librarian
(617) 536-5400

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Boston, Masachusetts 02215
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(617) 353-3710

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324 Lee Library
Provo, Utah 84602
Donald K. Nelson, Director
(801) 374-1211 Ext. 2905

University of British Columbia Library
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Basil Stuart-Stubbs, Librarian
(604) 228-2298

Brown University Library
Providence, Rhode Island 02912
Charles Churchwell, Librarian
(401) 863-2162

University of California Library
Berkeley, California 94720
Richard Dougherty, Librarian
(415) 642-3773

University of California Library
Davis California 95616
Bernard Kreissman, Librarian
(916) 752-2110

University of California Library
Los Angeles, California 90024
Russell Shank, Librarian
(213) 825-1201

University of California, San Diego
The University Library
La Jolla, California 92037
Millicent Abell, Librarian
(714) 452-3061

University of California, Santa Barbara
Santa Barbara, California 93106
Allen B. Veaner, Librarian
(805) 961-3256

Case Western Reserve University Libraries
Cleveland, Ohio 44106
James V. Jones, Director
(216) 368-2990

Center for Research Libraries
5721 Cottage Grove Avenue
Chicago, Illinois 60637
Gordon R. Williams, Director
(312) 955-4545

University of Chicago Library
Chicago, Illinois 60637
Stanley McElderry, Director
(312) 753-2933

University of Cincinnati Libraries
Cincinnati, Ohio 45221
Harold Schell, Dean, Library Admin. &
Director of Libraries (513) 475-2533

University of Colorado Library
Boulder, Colorado 80309
Clyde Walton, Director
(303) 492-6144

Colorado State University Library
Fort Collins, Colorado 80521
Le Moyne W. Anderson, Director
(303) 491-5911

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New York, New York 10027
Patricia Battin, Vice Pres.
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Storrs, Connecticut 06268
John P. McDonald, Director
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Ithaca, New York 14850
J. Gormly Miller, Director
(607) 256-3689

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Hanover, New Hampshire 03755
Edward Connery Lathem, Librarian
(603) 646-2236

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Durham, North Carolina 27706
Connie R. Dunlap, Librarian
(919) 684-2034

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Atlanta, Georgia 30322
Paul Cousins, Acting Director
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Gainesville, Florida 32603
Gustave A. Harrer, Director
(904) 392-0341

Florida State University Library
Tallahassee, Florida 32306
Charles Miller, Director
(904) 644-5211

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Washington, D.C. 20007
Joseph E. Jeffs, Director
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Athens, Georgia 30601
Warren N. Boes, Director
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Cambridge, Massachusetts 02138
Douglas W. Bryant, Director
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Honolulu, Hawaii 96822
Don L. Bosseau, Director
(808) 958-7205

University of Houston Libraries
Houston, Texas 77004
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(713) 749-2340

Howard University Libraries
Washington, D.C. 20001
Binford H. Conley, Director
(202) 636-7234

University of Illinois Library
Urbana, Illinois 61801
Hugh Atkinson, Director
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Bloomington, Indiana 47401
W. Carl Jackson, Dean of Libraries
(812) 337-3404

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Iowa City, Iowa 52240
Leslie W. Dunlap, Dean of Lib. Admin.
(319) 353-4450

Iowa State University Library
Ames, Iowa 50011
Warren Kuhn, Dean of Library Services
(515) 294-1442

John Crerar Library
Chicago, Illinois 60616
William S. Budington, Director
(312) 225-2526

Johns Hopkins University Library
The Milton S. Eisenhower Library
Baltimore, Maryland 21218
David Stam, Librarian
(301) 338-8325

Joint University Libraries
Nashville, Tennessee 37203
Frank P. Grisham, Director
(615) 322-2834

University of Kansas Library
Lawrence, Kansas 66044
James Ranz, Dean of Libraries
(913) 864-3601

University of Kentucky Libraries
Lexington, Kentucky 40506
Paul Willis, Director
(606) 257-3801

Kent State University Libraries
Kent, Ohio 44242
Hyman W. Kritzer, Assistant Provost &
Director of Libraries (216) 672-2962

Library of Congress
Washington, D.C. 20540
Daniel J. Boorstin, Librarian
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Linda Hall Library
Kansas City, Missouri 64110
Thomas D. Gillies, Director
(816) 363-4600

Louisiana State University Library
Baton Rouge, Louisiana 70803
George Guidry, Jr., Director
(504) 388-3969

McGill University Library
Montreal, P.Q., Canada H3C 3G1
Marianne Scott, Director
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McMaster University
1280 Main Street West
Hamilton, Ontario, Canada L8S 4L6
William Ready, University Librarian
(416) 525-9140 Local 4781

University of Maryland Library
College Park, Maryland 20742
H. Joanne Harrar, Librarian
(301) 454-3011

University of Massachusetts Libraries
Amherst, Massachusetts 01002
Richard J. Talbot, Director
(413) 545-0284

Massachusetts Inst. of Technology Libs.
Cambridge, Massachusetts 02139
Jay Lucker, Director
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P.O. Box 248214
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Frederick H. Wagman, Director
(313) 764-9356

Michigan State University Library
East Lansing, Michigan 48823
Richard Chapin, Librarian
(517) 355-2341

University of Minnesota Libraries
Minneapolis, Minnesota 55455
Eldred Smith, Director
(612) 373-3097

University of Missouri Library
Columbia, Missouri 65201
John Gribbin, Director
(314) 882-4701

National Agricultural Library
Beltsville, Maryland 20705
Richard A. Farley, Director
(301) 344-3779

National Library of Canada
395 Wellington Street
Ottawa, Ont., Canada K1A ON4
Joseph Guy Sylvestre, Librarian
(613) 992-0401

National Library of Medicine
Bethesda, Maryland 20014
Martin M. Cummings, Director
(301) 496-6221

University of Nebraska Libraries
Lincoln, Nebraska 68508
Gerald A. Rudolph, Dean of Libraries
(402) 472-7211

New York Public Library
New York, New York 10018
Richard W. Couper, President
(212) 695-3231

New York State Library
State Education Department
Albany, New York 12234
Joseph F. Shubert, State Librarian
(518) 474-5930

New York University Libraries.
New York, New York 10003
Carlton C. Rochell, Dean of Libraries
(212) 598-2140

University of North Carolina Libraries
Chapel Hill, North Carolina 27515
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Evanston, Illinois 60210
John P. McGowan, Librarian
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University of Notre Dame Libraries
Notre Dame, Indiana 46556
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Ohio State University Libraries
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Norman, Oklahoma 73069
James B. Alsip, Interim Dir. of Libs.
(405) 325-2611 or 2614

Oklahoma State University Library
Stillwater, Oklahoma 74074
Roscoe Rouse, Librarian
(405) 624-6321

University of Oregon Library
Eugene, Oregon 97403
H. William Axford, University Libn.
(503) 686-3056

University of Pennsylvania Libraries
Philadelphia, Pennsylvania 19174
Richard De Gennaro, Director
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Pennsylvania State University Library
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Stuart Forth, Dean of Univ. Libraries
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University of Pittsburgh Libraries
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Glenora Edwards Rossell, Director
(412) 624-4401

Princeton University Library
Princeton, New Jersey 08540
Richard Boss, Librarian
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Lafayette, Indiana 47907
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Queen's University
Douglas Library
Kingston, Canada K7L 5C4
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Rice University Library
6100 S. Main, Box 1892
Houston, Texas 77001
Richard L. O'Keeffe, Librarian
(713) 527-4022

University of Rochester Libraries
Rochester, New York 14627
Alan R. Taylor, Acting Director
(716) 275-4463

Rutgers University Library
New Brunswick, New Jersey 08901
George A. Carroll, Acting Univ. Libn.
(201) 932-7505

Smithsonian Institution Libraries
Constitution Avenue at 10th St., N.W.
Washington, D.C. 20560
Jean Smith, Acting Director
(202) 381-5496

University of South Carolina
Columbia, South Carolina 29208
Kenneth E. Toombs, Director of Libs.
(803) 777-3142

University of Southern California Library
Los Angeles, California 90007
Roy L. Kidman, Librarian
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Southern Illinois University Library
Carbondale, Illinois 62901
Kenneth G. Peterson, Dean of
Library Affairs
(618) 453-2522

Stanford University Libraries
Stanford, California 94305
David C. Weber, Director
(415) 497-2016

State University of New York at Albany
1400 Washington Avenue
Albany, New York 12222
C. James Schmidt, Director
(518) 457-8540

State University of New York at Buffalo
Libraries
Buffalo, New York 14214
Saktidas Roy, Director
(716) 831-4216

State University of New York at Stony Brook
Stony Brook, New York 11790
John B. Smith, Director & Dean of Lib.
(516) 246-5650

Syracuse University Libraries
Syracuse, New York 13210
Donald Anthony, Director
(315) 423-2574

Temple University Library
Philadelphia, Pennsylvania 19122
Arthur Hamlin, Director
(215) 787-8231

University of Tennessee Libraries
Knoxville, Tennessee 37916
Donald R. Hunt, Director
(615) 974-4127

University of Texas Libraries
Austin, Texas 78712
Harold W. Billings, Act. Director
(512) 471-3811

Texas A&M University Library
College Station, Texas 77843
Irene B. Hoadley, Director
(713) 845-6111

University of Toronto Libraries
Toronto, Ont., Canada M5S 1A5
Robert Blackburn, Director
(416) 978-2292

Tulane University Library
New Orleans, Louisiana 70118
Dorothy G. L. Whittemore, Acting Libn.
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University of Utah Libraries
Salt Lake City, Utah 84112
Roger Hanson, Director
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Virginia Polytechnic Inst. and State Univ.
Blacksburg, Virginia 24061
H. Gordon Bechanan, Director of Libs.
(703) 951-5593

University of Virginia Libraries
Charlottesville, Virginia 22903
Ray Frantz, Jr., Librarian
(804) 924-3026

University of Washington Library
Seattle, Washington 98105
Merle N. Boylan, Director
(206) 543-1760

Washington State University Library
Pullman, Washington 99163
Dr. Allene F. Schnaitter, Director
(509) 335-4557

Washington University Libraries
St. Louis, Missouri 63130
Ms. Renata Rotkowicz, Act. Univ. Libn.
(314) 863-0100 Ext. 4523

Wayne State University Libraries
Detroit, Michigan 48202
Vern M. Pings, Director
(313) 577-4020

University of Western Ontario
London 72, Canada
Dr. Robert Lee, Director of Libs.
(519) 679-3165

University of Wisconsin Libraries
Madison Wisconsin 53706
Joseph H. Treyz, Jr., Director
(608) 262-3521

Yale University Libraries
New Haven, Connecticut 06520
Rutherford D. Rogers, Librarian
(203) 436-2456

ASSOCIATION OF RESEARCH LIBRARIES

REPORT ON FINANCIAL STATEMENTS
(with supplemental material)

TWO YEARS ENDED DECEMBER 31, 1977

Seidman & Seidman
CERTIFIED PUBLIC ACCOUNTANTS

Seidman & Seidman
CERTIFIED PUBLIC ACCOUNTANTS
1200–18th Street, N. W., Washington, D. C. 20036 (202) 293-1570

January 25, 1978

Board of Directors
Association of Research Libraries
Washington, D. C.

We have examined the statement of assets and liabilities of the Association of Research Libraries as of December 31, 1977 and 1976, and the related statements of receipts and disbursements and changes in fund balances for the years then ended. Our examinations were made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We did not examine the financial statements of the Foreign Newspaper Microfilm Project which reflect total assets and revenues of 11% and 20% respectively for 1977 and 8% and 15% for 1976. These statements were examined by other auditors whose reports have been furnished to us. Our opinion, insofar as it relates to the amounts included for this project, is based solely upon the reports of the other auditors.

As described in the note "Summary of Accounting Policies", the Association's policy is to prepare its financial statements on the basis of cash receipts and disbursements; consequently certain revenue and the related assets are recognized when received rather than when earned, and certain expenses are recognized when paid rather than when the obligation is incurred. Accordingly, the accompanying financial statements are not intended to present financial position and results of operations in conformity with generally accepted accounting principles.

Offices Throughout the United States • Representation in Other Parts of the World through Binder Seidman International

In our opinion, based upon our examination and the reports of the other auditors, the accompanying statements present fairly the assets and liabilities of the Association of Research Libraries at December 31, 1977 and 1976, arising from cash transactions, and the recorded cash receipts and disbursements and changes in fund balances during the years then ended, on the basis of accounting described in the note "Summary of Accounting Policies" which basis has been applied in a consistent manner.

Seidman & Seidman
Certified Public Accountants

ASSOCIATION OF RESEARCH LIBRARIES

STATEMENT OF ASSETS AND LIABILITIES

	December 31, 1977	December 31, 1976
ASSETS		
Cash in bank and on hand	$ 334	$ 21 208
Cash in savings accounts	2 936	48 491
Cash held by others - agency fund	63 811	53 323
Savings certificates	524 486	526 564
Deposits	1 281	1 174
	$592 848	$650 760
LIABILITIES		
Payroll taxes withheld	$ 2 511	$ 2 226
Special programs for which the Association is accountable to the grantors	4 827	109 072
Total liabilities	7 338	111 298
FUND BALANCES		
General Operating Fund	137 267	140 016
Foreign Newspaper Microfilm Project Agency Fund	63 811	53 323
Chinese Center Revolving Fund	384 432	346 123
Total fund balances	585 510	539 462
	$592 848	$650 760

See accompanying notes to financial statements.

ASSOCIATION OF RESEARCH LIBRARIES

GENERAL OPERATING FUND
STATEMENT OF RECEIPTS AND DISBURSEMENTS AND CHANGES IN FUND BALANCE

	Year ended December 31, 1977	1976
RECEIPTS:		
Dues	$212 000	$200 000
Interest	16 672	14 142
Publications	7 555	9 684
Royalties	205	255
Miscellaneous	-	2 336
Total receipts	236 432	226 417
DISBURSEMENTS	271 875	252 362
Less administrative expenses charged to special programs	32 694	28 200
Net disbursements	239 181	224 162
EXCESS (DEFICIENCY) OF RECEIPTS OVER DISBURSEMENTS	(2 749)	2 255
FUND BALANCE, at beginning of year	140 016	137 761
FUND BALANCE, at end of year	$137 267	$140 016

See accompanying notes to financial statements.

ASSOCIATION OF RESEARCH LIBRARIES

FOREIGN NEWSPAPER MICROFILM PROJECT AGENCY FUND
STATEMENT OF RECEIPTS AND DISBURSEMENTS AND CHANGES IN FUND BALANCE

	Year ended December 31, 1977	1976
RECEIPTS:		
Dues	$ 82 033	$ 74 572
Sales to members and non-members	77 877	57 965
Interest	3 378	2 372
Totals	163 288	134 909
DISBURSEMENTS:		
Newspapers and microfilm	64 275	46 551
Purchases for members and non-members	41 553	40 626
Salaries	37 215	36 206
Payroll taxes	2 894	2 376
Storage	1 760	1 760
Insurance	1 758	856
Supplies	1 579	1 502
Royalties	852	1 542
Professional fees	850	775
Miscellaneous	64	103
Totals	152 800	132 297
EXCESS OF RECEIPTS OVER DISBURSEMENTS	10 488	2 612
FUND BALANCE, at beginning of year	53 323	50 711
FUND BALANCE, at end of year	$ 63 811	$ 53 323

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See accompanying notes to financial statements.

ASSOCIATION OF RESEARCH LIBRARIES

CHINESE CENTER REVOLVING FUND
STATEMENT OF RECEIPTS AND DISBURSEMENTS AND CHANGES IN FUND BALANCE

	Year ended December 31, 1977	1976
RECEIPTS:		
Sale of publications	$113 624	$116 430
Interest income	26 452	23 446
	140 076	139 876
DISBURSEMENTS:		
Cost of publications	82 843	51 842
Postage and other expenses	18 924	5 074
Transfer to Center for Chinese Research Materials program	-	23 899
	101 767	80 815
EXCESS OF RECEIPTS OVER DISBURSEMENTS	38 309	59 061
FUND BALANCE, at beginning of year	346 123	287 062
FUND BALANCE, at end of year	$384 432	$346 123

See accompanying notes to financial statements.

ASSOCIATION OF RESEARCH LIBRARIES

NOTES TO FINANCIAL STATEMENTS

SUMMARY OF ACCOUNTING POLICIES

Basis of accounting

The accounts of the Association are maintained on a cash basis of accounting. Under this method, effect is given only to cash collections and payments. Accordingly, the financial statements do not show accrued income, costs and expenses, and the receivables and payables that would results from such accruals.

Office equipment

The Association charges payments for office equipment (not material in amount) to current operations and shows no equipment in its accounts.

INCOME TAXES

The Association is exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code and a provision for income taxes is not required.

LEASE

The Association leases office facilities under an operating lease expiring June 30, 1978, requiring minimum annual rental of $23,240.

Total rent and storage charges were $23,333 for 1977 and $21,670 for 1976.

RETIREMENT PLANS

The Association has a retirement plan that covers substantially all full-time employees. Contributions to the plan are based on a percentage of salary for enrolled staff members. Total amounts paid in by the Association were $40,241 and $33,244 for 1977 and 1976, respectively.

SUPPLEMENTAL MATERIAL

Our examination of the financial statements included in the preceding section of this report was directed to an expression of our opinion on those statements taken as a whole. The supplemental material presented in the following section of this report has been subjected to certain audit procedures applied in connection with our examination of the financial statements. This information, while not considered necessary for the fair presentation of the statements of assets and liabilities and receipts and disbursements of the Association, is, in our opinion, fairly stated in all material respects when considered in relation to the financial statements taken as a whole.

Seidman & Seidman
Certified Public Accountants

Washington, D. C.
January 25, 1978

ASSOCIATION OF RESEARCH LIBRARIES

GENERAL OPERATING FUND
SCHEDULE OF DISBURSEMENTS

	Year ended December 31, 1977	1976
Board and committee expenses	$ 8 556	$ 8 633
Computer services	1 800	-
Conference expense	14 523	14 785
Dues	2 077	2 401
Employment fees	900	1 025
Equipment purchases	1 823	442
Honorarium	1 100	2 002
Hospitalization	1 565	1 241
Insurance and bonding	1 795	1 588
Life insurance	-	4 102
Miscellaneous	1 658	488
Payroll taxes	5 420	5 553
Periodicals and subscriptions	1 788	1 645
Printing	15 879	8 011
Professional fees	9 763	28 356
Postage and freight	3 214	2 925
Rent	8 192	7 628
Retirement plan	15 720	14 010
Salaries	119 904	107 297
Staff travel and expenses	12 992	8 685
Stationery and office expenses	7 051	4 482
Telephone	3 655	4 563
Funding for special programs - University Library Management Study Office	32 500	22 500
Totals	$271 875	$252 362

ASSOCIATION OF RESEARCH LIBRARIES

SPECIAL PROGRAMS
SCHEDULE OF RECEIPTS AND DISBURSEMENTS

	Year ended December 31, 1977			
	Center for Chinese Research Materials	University Library Management Study Office	Collection Analysis Program	Index Grant W.H. Wilson
RECEIPTS:				
Grants	$168 000	$ 96 500	$	$12 200
Sale of publications		35 907		
Transfer from General Operating Fund				
Management Institutes		5 020		
Film service (net)		1 828		
Interest income			2 756	
Workshops and training programs		4 292		
Totals	168 000	143 547	2 756	12 200
DISBURSEMENTS:				
Allocated administrative fees		3 763	1 237	
Consulting fees	470			
Convention expenses			860	
Employee benefits	17 344	10 339	4 571	685
Equipment purchases				
Grants			60 000	
Miscellaneous		913	957	34
Office expenses	5 139	5 590	1 431	
Payroll taxes	5 853	5 399		
Periodicals and subscriptions	884	1 147		
Postage	541	5 378	1 799	
Printing	3 176	17 748	3 886	
Professional services	3 718			
Rent and storage	9 046	4 709	1 385	
Salaries and investigator fees	112 752	80 397	20 787	2 621
Telephone	1 189	3 622	1 046	
Training (net)				
Travel	8 433	6 918	7 745	
Totals	168 545	145 923	105 704	3 340
EXCESS OF RECEIPTS OVER (UNDER) DISBURSEMENTS	(545)	(2 376)	(102 948)	8 860
PROGRAM BALANCE - BEGINNING	723	(5 615)	106 212	
TRANSFERS FROM GRANTOR				
PROGRAM BALANCE - ENDING	$ 178	$ (7 991)	$ 3 264	$ 8 860

Year ended December 31, 1977						
Colonial American Libraries	Power Foundation Program	Brasenose II Conference	Standard Committee Meeting (CLR)	Fund for Release Time	Total	Year ended December 31, 1976 Total
$10 000	$4 100	$	$	$	$290 800	$367 000
					35 907	26 603
						22 500
					5 020	3 260
					1 828	(824)
		125			2 881	1 168
					4 292	5 117
10 000	4 100	125			340 728	424 824
					5 000	20 348
					470	465
					860	
					32 939	25 049
						2 250
					60 000	-
50					1 954	2 008
					12 160	10 760
					11 252	8 852
					2 031	1 388
					7 718	5 315
9 542	9 100				43 452	22 928
					3 718	-
					15 140	14 042
					216 557	170 114
					5 857	6 116
						240
160		1 196	2 331		26 783	13 888
9 752	9 100	1 196	2 331	-	445 891	303 763
248	(5 000)	(1 071)	(2 331)	-	(105 163)	121 061
	5 000	2 752			109 072	64 112
						185 173
				918	918	(76 101)
$ 248	$ -	$1 681	$(2 331)	$918	$ 4 827	$109 072

ASSOCIATION OF RESEARCH LIBRARIES

PROOF OF CASH
YEAR ENDED DECEMBER 31, 1977

CASH BALANCE, beginning	$650 760
ADD - Excess of receipts over (under) disbursements:	
Special programs for which the Association is accountable to the grantors	(104 245)
General Operating Fund	(2 749)
Foreign Newspaper Microfilm Project Agency Fund	10 488
Chinese Center Revolving Fund	38 309
Payroll taxes fourth quarter 1977 paid January 1978	2 511
	595 074
LESS - Payroll taxes fourth quarter 1976 paid January 1977	2 226
CASH BALANCE, ending	$592 848